

Historic, Archive Document

Do not assume content reflects current scientific knowledge, policies, or practices.



2 SD11
.R23

CAT/stn



Forest Service

Tongass
National Forest

R10 - MB-367b

June 1998



Sea Level Timber Sale

Draft Environmental Impact Statement

Volume II



Acronymns And Symbols

ADF&G	Alaska Department of Fish and Game
AHMU	Aquatic Habitat Management Unit
ANCSA	Alaska Native Claims Settlement Act
ANILCA	Alaska National Interest Lands Conservation Act
ASQ	Allowable Sale Quantity
BBF	One Billion Board Feet
BMP	Best Management Practice
CEQ	Council on Environmental Quality
CFL	Commercial Forest Land
CFR	Code of Federal Regulations
CZMA	Coastal Zone Management Act of 1976
DBH	Diameter at Breast Height
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
EVC	Existing/Expected Visual Condition
FSH	Forest Service Handbook
FSM	Forest Service Manual
GIS	Geographic Information System
IDT	Interdisciplinary Team
KPC	Ketchikan Pulp Company
KV	Knutsen-Vandenberg Act
LSTA	Logging System Transportation Analysis
LTF	Log Transfer Facility
LUD	Land Use Designation
LWD	Large Woody Debris
MBF	One Thousand Board Feet
MIS	Management Indicator Species
MM	Maximum Modification
MMBF	One Million Board Feet
NEPA	National Environmental Policy Act
NFMA	National Forest Management Act
NMFS	National Marine Fisheries Service
NOI	Notice of Intent
P	Primitive
PR	Partial Retention
R	Retention
RM	Roaded Modified
RN	Roaded Natural
ROD	Record of Decision
ROS	Recreation Opportunity Spectrum
SHPO	State Historic Preservation Officer
SPM	Semi-Primitive Motorized
SPNM	Semi-Primitive Nonmotorized
TLMP	Tongass Land Management Plan
TRUCS	Tongass Resource Use Cooperative Survey
TTRA	Tongass Timber Reform Act
USDA	United States Department of Agriculture
USDI	United States Department of the Interior
USFWS	United States Fish and Wildlife Service
VCU	Value Comparison Unit
VQO	Visual Quality Objective
WAA	Wildlife Analysis Area

Acknowledgments

Front cover: By Cindy Ross Barber, 1992. The design illustrates the range of interconnected issues addressed in the EIS.

Volume II

Appendices A-H

Appendices

- A** Reasons for Scheduling the Environmental Analysis of the Sea Level Project Area
- B** Subsistence Maps
- C** Biological Assessment and Biological Evaluation
- D** Watershed Report
- E** Road Maintenance Levels
Traffic Service Levels
Road Management Objectives
Road Condition Survey Data
- F** Recommended Sale Area Improvement Projects
- G** Wetland Values Matrix
- H** Part 1 - Unit Cards
Part 2 - Road Cards



Appendix A

Reasons for Scheduling the
Environmental Analysis of
the Sea Level Project Area

APPENDIX A

THE FOLLOWING TABLES
CONTAIN THE DATA
FOR THE STUDY

Reasons for Scheduling the Environmental Analysis of the Sea Level Project Area

Summary

Reasons for scheduling the Sea Level Project Area at this time may be summarized as follows:

1. The Sea Level Project Area contains a sufficient number of acres allocated to development land use designations (LUDs) to make timber harvest in the area appropriate under the 1997 Tongass Land Management Plan (TLMP). Available information indicates harvest of the amount of timber being considered for this project can occur consistent with 1997 TLMP standards and guidelines and other requirements for resource protection.
2. Areas with available timber will be necessary to consider for harvest in order to meet TLMP timber supply and employment opportunity objectives, as well as the desired future conditions for land use allocations within the project area.
3. Effects on subsistence resources are projected to differ little according to which sequence these areas are subjected to harvest. Harvesting other areas with available timber on the Tongass National Forest is expected to have similar potential effects on resources, including those used for subsistence, because of widespread distribution of subsistence use and other factors. Harvest of these other areas is foreseeable, in any case, over the forest planning horizon under the 1997 TLMP.
4. Providing substantially less timber volume than necessary to meet 1997 TLMP timber supply and employment opportunity objectives in order to avoid harvest in the Sea Level Project Area is not necessary or reasonable.
5. It is reasonable to schedule harvest in the Sea Level Project Area rather than other areas in terms of previous harvest entry and access, level of controversy over subsistence and other effects, and the ability to comply with the National Environmental Policy Act (NEPA) process and make timber available in a timely manner to meet market demand. Other areas that are reasonable to consider for harvest in the near future are the subject of other project EISs that are currently ongoing or scheduled to begin soon.
6. An infrastructure (roads, bridges, rock pits, log transfer facilities, etc.) is in place and is in need of maintenance to reduce potential resource damage. Eleven blocked fish passages will be fixed, one bridge will be replaced and nineteen water quality drainage structure failures will be corrected.

More detail regarding the scheduling of the environmental analysis for the Sea Level Project Area is presented in this appendix in three subsections:

- Southeast Alaska Timber Demand
- Tongass Land Management Plan
- Forest Plan Implementation

Southeast Alaska Timber Demand

Introduction

In general, this section indicates that areas with available timber will be necessary to consider for harvest in order to meet TLMP timber supply and employment opportunity objectives.

Meeting Market Demand

Timber demand in Southeast Alaska can vary dramatically from year to year. The level of demand is dependent on complex interactions among factors that are difficult, if not impossible, for the industry or the Forest Service to predict with accuracy. Such factors include fluctuations in interest rates, housing starts, business cycles in the United States and overseas, changes in the value of the dollar with respect to foreign currencies, changes in import tariffs, and changes in export policies in other countries.

To be responsive to market demand, the Forest Service intent is to provide an opportunity for the industry as a whole to accumulate a supply of purchased, but unharvested timber (i.e. volume under contract) equal to about three years of timber consumption. There are a number of reasons for allowing the accumulation of volume under contract. First, this allows the industry ample time to plan an orderly and systematic harvest schedule that meets all timing restrictions and permit requirements. Second, it allows the industry to better manage its financial resources and to secure financing on the basis of longer term timber supply. Third, it allows time for the necessary infrastructure (roads, log transfer facilities, and logging camps) to be put in place prior to timber harvest. Fourth, it allows the Forest Service to develop an orderly progression of timber management projects in various stages of the planning process. Finally, an ample timber supply gives the industry more opportunity to sustain itself through market cycles. If demand for pulp or lumber in any year suddenly increases, producers will have access to enough timber to respond to the increase in demand without waiting for the Forest Service or the Congress to take action. Normally, the unharvested volume under contract will be drawn down during high points in the market when mills increase production, and built up when markets are poor and production declines. In response to changes observed in the volume under contract, the Forest Service may consider adjusting its budget and timber program.

From the initiation of a timber sale project, through EIS and decision document preparation, and to the sale of timber from the project, usually requires three to four years. Such lengthy preparation time means that in order to have a stable timber supply and be able to respond to upswings in the market, there is a need to have ongoing timber management projects in various stages of the planning process. It is also necessary to have a supply of completed NEPA projects available for sale if an increased market demand is to be met.

The timber industry in southeast Alaska is now in a period of transition. Following the closings of the Alaska Pulp Corporation (APC) pulp mill and the Ketchikan Pulp Corporation (KPC) pulp mill, new mills are either under construction or are being proposed, and existing mills are being upgraded. There is currently a joint venture between KPC and Sealaska for a veneer plant at Ward Cove in Ketchikan. This mill would also use utility grade log for chips. The veneer could be sent to other mills for manufacture into plywood or laminated veneer lumber, or a revamped facility at the former KPC pulp mill site could manufacture the veneer into secondary products. The plant could be on line as soon as the spring of 1999 with

a capacity of 150 million board feet annually (Jim Erickson, Sealaska 3/9/98). A new Seley Log and Lumber Company mill opened in February of 1998 on Gravina Island, in the Ketchikan area. The facility will employ 60 people if run at full capacity, and will house both a sawmill and secondary and tertiary manufacturing mills. Product outputs will include decking and fencing, and possibly furniture. The operation is expected to process 30 MMBF annually (Alan Monk, Seley Inc., March 1998). As for existing southeast Alaska mills, the Viking Lumber sawmill in Klawock, on Prince of Wales Island, recently underwent a modernizing upgrade and re-tooling; computerized equipment and a whole-log chipper were added (USDA Forest Service 1996). Also, the APC sawmill in Wrangell has been purchased by Silver Bay Logging (Wrangell Sentinel 1/15/98) and will be manufacturing wood products in 1998. All these mills will depend to some extent on a supply of timber from the Tongass National Forest.

The market demand analysis in the 1997 TLMP was based on a study by David Brooks and Richard Haynes, research scientists at the Pacific Northwest Research Station. Following the release of the 1997 TLMP, a final version of the Brooks and Haynes report was published, and it is this final report that is referenced and cited throughout this Appendix. Three scenarios (low, medium and high) were developed in the study to display the demand for Tongass National Forest timber through the year 2010 (Brooks and Haynes 1997). For the low scenario, high timber selling values, harvest costs and manufacturing costs limit Alaska's share of markets. Under the high scenario, increased harvest and manufacturing efficiency, with resulting lower costs, make Alaskan mills more competitive. Projected annual timber demand for the next decade is 113 MMBF for the low scenario, 133 MMBF for the medium, and 156 MMBF for the high scenario. These three scenarios did not consider the Seley mill that is under construction on Gravina Island, the proposed KPC veneer plant, or the possible sale and reopening of the APC sawmill in Wrangell. Nor did they account for shifting markets in Japan and the recent willingness of the Japanese to purchase Alaskan milled lumber, manufactured wood products, laminates, etc. All of these factors would lead to an increase in demand over the totals listed for the three scenarios.

The Allowable Sale Quantity (ASQ) for the Tongass averages 267 MMBF on an annual basis. However, an annual sale level of 200 MMBF or less is more likely to be offered over the next few years, given current market conditions and the transition that both the timber industry and the Forest Service are experiencing (USDA Forest Service 1997).

Tongass Land Management Plan

Chapter 1 of this EIS includes an explanation of how this project relates to the 1997 TLMP. That section describes the Land Use Designations (LUDs) which put land areas under different types of management prescriptions. Chapter 1 also explains that the Forest is divided into land areas called value comparison units (VCUs). In most cases, VCUs are roughly equivalent to large watersheds. A VCU may contain one or more LUDs.

The ASQ calculated in the 1997 TLMP is an upper limit, by decade, of the volume of timber that may be offered for sale from suitable timberland on the Forest as part of the regularly scheduled timber sale program. The current ASQ is 2.67 billion board feet per decade, which equates to an annual average of 267 million board feet. There are 676,000 acres suitable for timber management under the Forest Plan. Three LUDs (Timber Production, Modified Landscape, and Scenic Viewshed) account for nearly all of these suitable acres (USDA Forest Service 1997).

A Appendix

Cumulative Effects

The 1997 TLMP considers the cumulative effects for forest-wide acres managed for timber production for the timber sale program. These effects are discussed at the end of their respective sections.

Analysis points to the need to schedule harvest in VCUs assigned management prescriptions which permit consideration of timber harvest, including the VCUs within the Sea Level Project Area. These VCUs in the Forest plan would be needed to help meet 1997 TLMP timber supply objectives. The forest-wide cumulative effects analysis in the 1997 TLMP supports the conclusion that this harvest can be accomplished within existing standards and guidelines and other requirements for resource protection.

Subsistence

With the passage of the Alaska National Interest Lands Conservation Act (ANILCA), Congress recognized the importance of subsistence resources to rural residents of Alaska. In particular, prior to any disposition of public lands, an agency must first complete a subsistence effects evaluation, including consideration of the availability of other lands (ANILCA 810 (a)).

Based on a review of available harvest volumes for each value comparison unit (VCU) on the Ketchikan Area of the Tongass National Forest, it appeared that in order to meet market demand, most of the Timber Production land use designations would need some level of harvest in the first decade of the 1997 Tongass Land Management Plan. A tentative sale schedule was developed, and will be updated every six months based on this analysis (Ketchikan Area Sale Schedule Summary, December, 1997). In short, harvesting at this level to meet market demand, would indicate a level of impact to all subsistence use areas. However, the most significant impacts on subsistence deer habitat would not occur until 20 to 30 years after timber harvest when the second growth canopy closes. When those impacts to subsistence deer habitat are viewed from a reference point 20 years in the future, the particular importance of which areas are scheduled first during a 5-year period appears to be minor.

In considering rural communities that may be most affected by any proposed timber harvest in the Sea Level Project Area, Metlakatla, Meyers Chuck, Saxman, and Wrangell appear to have the strongest cultural and subsistence ties to the area. Each community has its own level of reliance on subsistence, as well as its own level of reliance on the Sea Level Project Area for supplying subsistence resources, especially deer. The following information about each community's subsistence use is a summary of more detailed information provided in Chapter 3 and Appendix F of the Sea Level Project EIS.

Metlakatla Boat access to roaded areas adjacent to or within the immediate vicinity of Carroll Inlet, George Inlet and Thorne Arm of the Project Area are some of the subsistence use areas used by the community. Metlakatla subsistence use is over 71 pounds of edible harvest per person per year. In the project area Metlakatlans fish for salmon and hunt for deer.

Saxman Boat access to road areas adjacent to or in the immediate vicinity of Carroll Inlet, George Inlet and Thorne Arm of the Project Area are some of the subsistence use areas for the community. Today, about 266 villagers consume an average of 89 pounds of food per capita per year from subsistence activities. Saxman residents fish for salmon and hunt for deer.

Meyers Chuck Subsistence use of salmon and deer within the Project Area has been reported by residents of Meyers Chuck. Over 414 pounds of edible harvest are consumed per person per year.

Wrangell Wrangell, located in the east-central portion of Southeast Alaska, is on the northern tip of Wrangell Island about 7 miles from the mouth of the Stikine River and approximately 50 air miles from the Project Area. More than 100 residents fish

commercially. It is the major source of income for 50 percent of those residents. Wrangell subsistence use is approximately 164 pounds consumed per person per year. In the Project Area, their reported use is for deer, salmon, crab, shrimp, and halibut.

As a result of several considerations, including the availability of subsistence resources in non-development land use designations on Revillagigedo Island (such as the Naha LUD II Areas and Misty Fiords National Monument adjacent to the Project Area, and Old-growth Habitat within the Project Area), standards and guidelines designed to maintain habitat (such as the 1,000-foot beach and estuary fringes), the relative independence of most communities from subsistence resources in the Project Area, as well as analysis contained in the 1997 Tongass Land Management Plan EIS and earlier analyses, the Forest Service determined to schedule an environmental analysis of the Sea Level area. Other Ketchikan Area projects including CPOW, North Revilla, Polk Inlet, Upper Carroll, Cholmondeley, Control Lake, Lab Bay, Luck Lake, Staney, Moira, Gravina, Chasina, and Port Stewart are being implemented, or will undergo environmental analysis within the next 3 to 5 years.

Extensive forest-wide cumulative effect analysis has been included in the 1997 TLMP EIS (TLMP EIS, Part 2, pages 3-529 through 3-685). That analysis, and the tables of data with the maps in Appendix H of the 1997 TLMP EIS are incorporated by reference into this document. The data in Appendix H indicates subsistence hunting of deer and other uses in virtually every area of the Tongass National Forest that have substantial quantities of harvestable timber. The following community information is extracted directly out of the 1997 Tongass Land Management Plan EIS:

- Subsistence use by Metlakatla households is unlikely to be directly affected by any of the [TLMP] alternatives as their most heavily used areas will be essentially unmodified under any option (1997 TLMP EIS, Part 2, page 3-606).
- All [TLMP] alternatives should be able to provide habitat capability for salmon, other finfish, or invertebrate harvested by Saxman residents. A deer population at carrying capacity should be able to support a hunter harvest of approximately 10 percent that is both sustainable and provides a reasonable high level of hunter success for the effort. All alternatives should be able to provide habitat capability for deer hunter by Saxman residents, as well as for all deer hunted within WAA's in the short term. In the long-term, no alternatives appear to have enough habitat capability to provide for deer for all hunters. (1997 TLMP, Part 2, page 3-643).
- All [TLMP] alternatives should be able to provide habitat capability for deer hunter by Meyers Chuck residents, as well as for all deer hunter within the WAA's. No significant decline in salmon, other finfish, or invertebrate habitat capability is expected from implementation of any alternative. (1997 TLMP, Part 2 page 3-610,611)
- No significant decline in salmon, other finfish, or invertebrate habitat capability is expected from implementation of any alternative for Wrangell residents. There is some risk of decline in salmon habitat capability over longer periods of time. All alternatives should be able to provide habitat capability for deer hunter by Wrangell residents, as well as for all deer hunter within the WAA's in the short term. Long term impacts will likely impact Wrangell's use area however, Old-growth Habitat LUD's will provide some habitat maintenance. (1997 TLMP, Part 2 page 3-674)

The analysis shown in Chapter 3 of this Project DEIS is supported by the analysis shown above in the 1997 TLMP EIS. The analyses for ANILCA section 810 are shown in the Subsistence section of Chapter 3, in this DEIS. The determinations made from the ANILCA section 810 analysis and findings will be a part of the Record of Decision for this project.

Forest Plan Implementation

Review of Available Volume

A review was conducted of each VCU for available volume. This analysis was based on inventories and ASQ calculations used for the TLMP. All areas available for timber harvest under the 1997 TLMP can be expected to be entered for harvest sometime in the future if the plan is fully implemented. This analysis represents one scenario for meeting the average annual ASQ of 267 MMBF. Obviously, there can be other scenarios which harvest either more or fewer acres in the Project Area and still attain the ASQ. Harvest projections from this analysis for the Sea Level Project Area are shown in Table 1.

Table 2 displays the Tongass National Forest Sale Schedule for 1997 and the following fiscal years 1998 through 2002. As is shown in this schedule and the summary in Table 3, the timber volume projected to be offered from the Tongass is approximately 225 MMBF per year for the next five years, or about 42 MMBF less than the average annual ASQ of 267 MMBF. However, when sales with a high potential for challenge are factored in, the net probable sale offering for the next five years is approximately 123 MMBF per year. The Ketchikan Area portion of the ASQ for the next ten years averages 120.5 MMBF on an annual basis. See Appendix L of the 1997 TLMP for a more detailed discussion. It is currently projected that about 50 MMBF would be available for harvest under the Sea Level Project and that the volume would be offered in four sales, one to two each of years 1999, 2000, and 2002. For those three years the average annual volume sold from this project would be 12.5 MMBF per year, or approximately 10 percent of the Ketchikan Area's yearly ASQ.

Table 1. TLMP projected acres of harvest by decade for Sea Level Project VCUs.

VCU	Decade*					Total	Total VCU
	1	2	3	4	5	Acres	Acres**
7460	1,175	991	140	1,245	0	3,551	26,400
7530	411	1,809	410	1,195	178	4,003	32,551
7552	127	279	127	55	148	736	8,252
7560	427	400	368	276	100	1,571	8,224
7570	219	482	259	360	73	1,393	11,135
7590	0	0	0	0	0	0	7,737
7542	0	0	0	0	0	0	381
Total	2,359	3,961	1,304	3,131	499	11,254	94,680

* Source: John Day (TLMP GIS Analyst 3/12/98)

** Source : James Llanos (GIS Analyst)

Table 2. Tongass National Forest Timber Sale Schedule, Fiscal Years 1997 - 2002

Chatham Area		
NEPA Project	Sale Name	Volume (MMBF)
FY 97		
SEIS	Humpback/Gallagher	21.3
SE Chichagof	Inbetween (AWRTA)	5.7
NW Baranof	Water World	8.7
NW Baranof	Duffield	20.6
SE Chichagof	Crab Bay (AWRTA)	7.8
Hoonah RD	Roadside Salvage	0.2
FY 98		
NW Baranof	Lisa Creek	6.0
NW Baranof	Schultz Cove	0.4
Port Houghton	North Houghton	11.0
Port Houghton	Little Lagoon	9.0
FY 99		
NW Baranof	St. Johns	10.7
8-Fathom	Neka	8.0
NW Baranof	Rod N' Apple	9.0
Sea Level	Sea Level 1	15.0
FY 00		
Port Houghton	Haystack 1	14.0
Finger Mountain	Broad Creek	21.0
Sea Level	Sea Level 2	9.0
FY 01		
8-Fathom	Salt Lake Bay	5.0
Finger Mountain	Crab Bay II	25.0
Kennel Creek	Kennel Creek	10.0
FY 02		
Ushk Bay	Poison Cove	19.1
Sea Level	Sea Level 3	10.0
Port Houghton	Haystack 2	15.0
Stikine Area		
FY 97		
N&E Kuiu	Rowan Settlement	8.0
S. Lindenburg	South Lindenburg 1	15.0
ATC	PRD ATC	5.0
King George	King George	24.0
Froot Loops	Loop	0.5
Nootkatensis	Nootkatensis	0.6
Pathway	Pathway	0.3
Mossy	Mossy	0.3
Bowl	Bowl	0.2
Etolin	Etolin	1.0

A Appendix

NEPA Project Sale Name Volume (MMBF) FY 97 Continued

Turn	Turn	1.2
PRD Small Sales	Misc Small Sales	2.0

FY 98

Shamrock	Clover	12.0
N&E Kuiu	Rowan Mt	16.0
N&E Kuiu	Crane	7.0
Todahl Backline	Todahl Backline	6.0
East Falls	East Falls	6.0
Canal/Hoya	Canal/Hoya	20.0
Nemo Loop	Nemo Loop	1.0
Donut	Donut	1.0
Salvage	Salvage	1.0
Misc Small Sales	Misc Small Sales	2.0

FY 99

Port Houghton	Fanshaw 1	31.0
Crystal Creek	ESS	16.0
South Zarembo	South Zarembo	20.0
Kuakan	Kuakan	17.0
WRD Small Sales	Misc Small Sales	2.0
PRD Small Sales	Misc Small Sales	2.0

FY 00

Mad Critter	Mad Critter	25.0
Woronofski	Woronofski	10.0
So. Lindenberg	So. Lindenberg II	10.0
Woodpecker	Woodpecker	15.0
East Kuiu	Kuiu I	22.0
WRD Small Sales	Misc Small Sales	2.0
PRD Small Sales	Misc Small Sales	2.0

FY 01

Douglas	Douglas I	44.0
Frenchy	Frenchy	3.0
Etolin	Mosman	25.0
WRD Small Sales	Misc Small Sales	5.0
PRD Small Sales	Misc Small Sales	2.0

FY 02

Etolin	Whaletail	25.0
East Kuiu	Kuiu II	40.0
Sumner	Sumner	6.0
WRD Small Sales	Misc Small Sales	5.0
PRD Small Sales	Misc Small Sales	3.0

Ketchikan Area

FY 97

Heceta Sawfly	Heceta Sawfly	11.2
KRD LYD	KRD LYD	0.2
Lab Bay	Abandon	0.3

NEPA Project Sale Name Volume (MMBF)
FY 97 Continued

Lab Bay	Alder Creek	2.2
Lab Bay	Junction	0.2
Lab Bay	Lwr Big Creek	0.6
Lab Bay	Ridge	0.6
Lab Bay	Rock King	2.1
Lab Bay	Buster Bay	0.2
Lanc'er Sal	Lanc'er Sal	1.1
Mtn Beaver	Mtn Beaver	1.0
Naukati/Sar	Naukati/Sar	22.9
Polk Inlet	Sentinel	5.8
Relief Sal	Relief Sal	0.3
Small Sales	Small Sales	3.2
Thorne Log Yard	Thorne Log Yd	0.1
Upper Carroll	Upper Carroll	30.0

FY 98

Chasina	Dumpy ATC	9.7
Control Lake	Beaver Pond	0.3
Control Lake	Big Salt	13.2
Control Lake	Hard Steel	6.7
Control Lake	Lwr Beaver	0.2
Control Lake	Muskrat	0.4
Control Lake	Nth Thorne	2.7
Control Lake	Rio Beaver	5.3
Control Lake	Rush Fash	1.6
Control Lake	Rush/Angel	9.0
Control Lake	West Steel	0.2
Control Lake	Wolf Pup	1.5
Fire Cove	Fire Cove	4.0
KRD LYD	KRD LYD	0.2
Lab Bay	Big Bob	9.9
Lab Bay	Summit/Exchange	15.3
LYD & Small Sales	LYD & Small Sales	2.0
Polk Inlet	Cable/Drop	11.0
TB Small Sales	TB Small Sales	5.0

FY 99

Chasina	North	7.5
Chasina	Port J	11.0
Chasina	South Arm	7.9
Control Lake	Control Lake	10.0
Control Lake	Gander	5.2
Control Lake	Kogish	7.5
Control Lake	Logjam	1.8
Control Lake	Steel/Rbrts	3.9
CPOW Cleanup	B and E	2.5
CPOW Cleanup	K Jim	1.0
CPOW Cleanup	Neck Lake	1.8
CPOW Cleanup	Whale Pass	2.7
LYD/Small Sales	LYD/Small Sales	2.0
Polk Inlet	Longline	2.9
Polk Inlet	Lowboy	1.1

A Appendix

NEPA Project	Sale Name	Volume (MMBF)
FY 99 Continued		
Sea Level	Madder	10.0
Sea Level	Ten Pin	10.0
Sea Level	Toe-Dance	10.0
Small Sales	Small Sales	0.5
TB Small Sales	TB Small Sales	5.0
FY 00		
CG Small Sales	CG Small Sales	2.0
Cholmondeley	Dr. Point	16.7
Control Lake	Control Lake	12.0
Lab Bay	Thorne Island	3.5
Luck Lake	Luck Lake 1	5.0
Luck Lake	Luck Lake 2	8.0
Sea Level	Orion	20.0
Staney	Staney Creek 1	10.0
Sunny Cove	Sunny	14.0
TB Small Sales	TB Small Sales	5.0
FY 01		
Cedar Decline	Cedar	5.0
CG Small Sales	CG Small Sales	2.0
Cholmondeley	Skowl	6.7
Moir	Perkins	23.0
Port Stewart	Mongoos	30.0
Staney	Staney Ck 2	10.0
Staney	Staney Ck 3	15.0
TB Small Sales	TB Small Sales	5.0
FY 02		
CG Small Sales	CG Small Sales	2.0
Control Lake	Control Lake	9.6
Gravina	Dutchman	8.0
Gravina	Palisade	7.0
KOS OG	KOS 1	8.0
KOS OG	KOS 3	3.0
Moir	Black	11.3
Moir	Frederick	11.0
N Dall	Dall	10.0
North Thorne	Thorne 1A	4.5
North Thorne	Thorne 2	5.0
Port Stewart	Cabala	20.0
TB Small Sales	TB Small Sales	5.0

Table 3. Timber Sale Schedule Summary Volume (MMBF) by Administrative Area by Fiscal Year.

	FY 97	FY98	FY99	FY00	FY01	FY02	FY 98-02 Ave.
Chatham Area	64	46	43	44	40	44	43
Stikine Area	58	72	88	86	79	79	81
Ketchikan Area	84	102	104	96	97	104	101
Tongass NF	206	220	235	226	216	227	225

Areas Suitable for Timber Harvest

Table 4 displays Ketchikan Area existing and future timber sale projects areas, made up of logical groupings of VCU's. This represents the majority of locations on the Ketchikan Area with suitable areas for timber harvest.

Table 4. Current and future timber sale project areas on Ketchikan Area, Tongass NF.

Timber Project Location and Projected Volume	Projected Volume (MMBF)	Tentative Suitable Acres	Previous Harvest Acres	Percent	Projected Project Acres	Percent
Central Prince of Wales EIS VCUs 557; 571-574; 577; 579-590; 598-601.1; 549.2-554	267	87,529	47,862	54.7	7,870	9.0
North Revilla EIS VCUs 732; 733; 735-740	200	26,861	7,051	26.3	6,485	24.1
Polk Inlet EIS VCUs 610-613; 618-622; 624; 674; 675	125	34,832	12,984	37.3	4,116	11.8
Lab Bay EIS VCUs 527-540; 551	40	34,736	17,361	50.0	1,400	4.0
Control Lake EIS VCUs 574-578; 591-597.2	140	37,358	11,335	30.3	4,700	12.6
Upper Carroll EIS VCUs 737; 744; 746	40	10,076	2,960	29.4	1,400	13.9
Vixen Inlet EIS VCUs 708-710; 718; 720; 721	40	7,094	152	2.1	1,400	19.7
Ratz EIS VCUs 572; 579-585	10	23,150	14,113	61.0	300	1.3
Tuxekan EIS VCUs 554.2; 556; 557; 560; 571	15	20,472	12,515	61.1	500	2.3
Chasina EIS VCUs 677-681	40	6,475	1,101	17.0	1,400	21.6
Sea Level EIS VCUs 746;753;755-757; 759	50	17,096	4,657	27.2	1,400	8.2
Port Stewart EIS VCUs 713-717;719; 722;723	35	16,571	919	5.6	1,200	7.2
Moir EIS VCUs 694;695;699; 700-704	40	10,293	0		1,400	13.6
Chomley EIS VCUs 691-693	60	7,501	0		2,000	26.7
South Prince of Wales EIS VCUs 694; 695;699; 700-704	36	7,565	0		1,200	15.9
North Prince of Wales EIS	90	98,812	51,157	51.8	3,000	3.0
Luck Lake EIS	60	42,777	21,416	50.1	2,000	4.7
Lower Carroll EIS VCU 744	40	9,393	1,642	17.5	1,400	14.9
Cleveland EIS	90	25,442	919	3.6	3,000	11.8
Dall Island EIS	25	2,314	0		750	32.4
Sukkwai EIS	30	8,969	694	7.7	1,000	11.2
S. Revilla EIS VCUs 743;747;748	20	6,891	439	6.4	600	8.7
K-15 EIS	15	10,102	3,003	29.7	500	5.0
K-32 EIS	10	26,861	7,051	26.3	350	1.3

Reasons for Scheduling the Sea Level Project for Environmental Analysis

In addition to the Sea Level Project Area's relative ability to provide timber, other factors considered in scheduling it for environmental analysis included:

- 1) This harvest level is consistent with the 1997 TLMP.
- 2) Sufficient volume is available in the project area. The initial entry into the Shoal Cove area took place between 1970 and 1989. All harvest units are stocked with trees greater than five feet tall. These units are no longer openings and adjacent harvest is permitted. Initial entry into the Shelter Cove area took place between 1993 and 1996. There is no harvest planned adjacent to these earlier units. The initial entry into the Elf Point area took place between 1992 and 1995. There is no harvest planned adjacent to these initial entry units.
- 3) There are 158 miles of specified road in the project area.
- 4) Existing Log Transfer Facilities can handle this volume of timber within a four year time frame. All sites are currently permitted.

Changes in timber demand could affect the rate at which projects move through the NEPA process or the timing of timber sales, but these changes will not alter the sequence for completing the NEPA process. Times of low market demand provide an opportunity to increase available timber supply in anticipation of cyclical higher demand periods. All areas in which commercial timber harvest is authorized under the TLMP are expected to receive some timber harvest at some time as the Forest Plan is implemented. Environmental impacts viewed in the long term are not expected to differ substantially based on the order in which areas are entered. The "No-Action" Alternative is considered in each timber sale project. Projects farthest along in the NEPA process, however, are the most efficient to consider for implementation first in order to meet Forest Plan objectives.

Appendix B

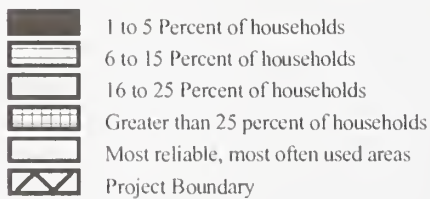
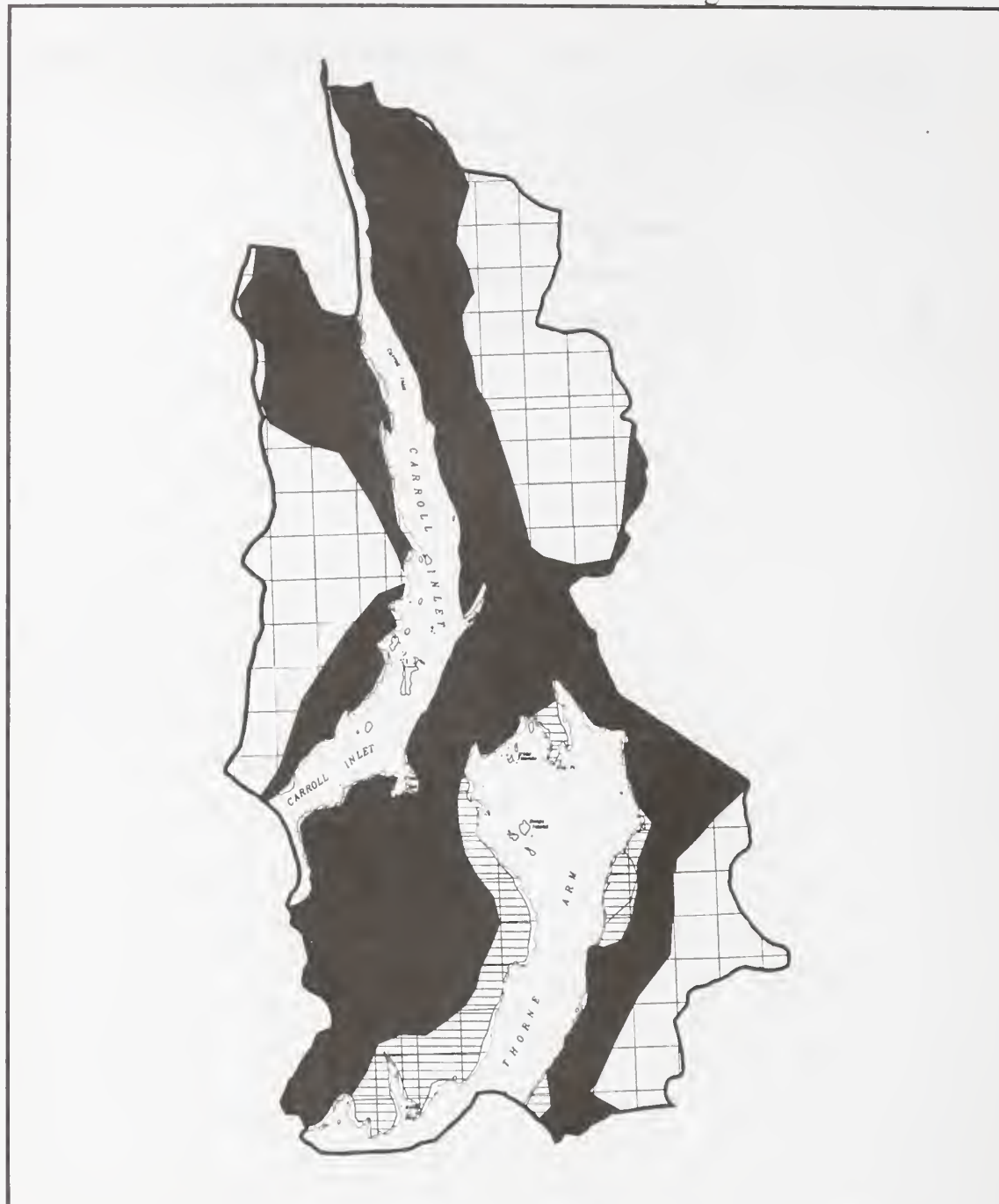
Subsistence Maps

In the following pages, areas of subsistence are illustrated through a series of maps. These maps are organized as follows:

- Deer for Metlakatla, Saxman and Wrangell,
- Finfish for Saxman and Wrangell,
- Invertebrates for Saxman,
- Marine mammals for Saxman and Wrangell, and
- Salmon for Metlakatla and Saxman.

B Appendix

Metlakatla Subsistence Deer Hunting Areas



Source: TRUCS, 1988; GIS

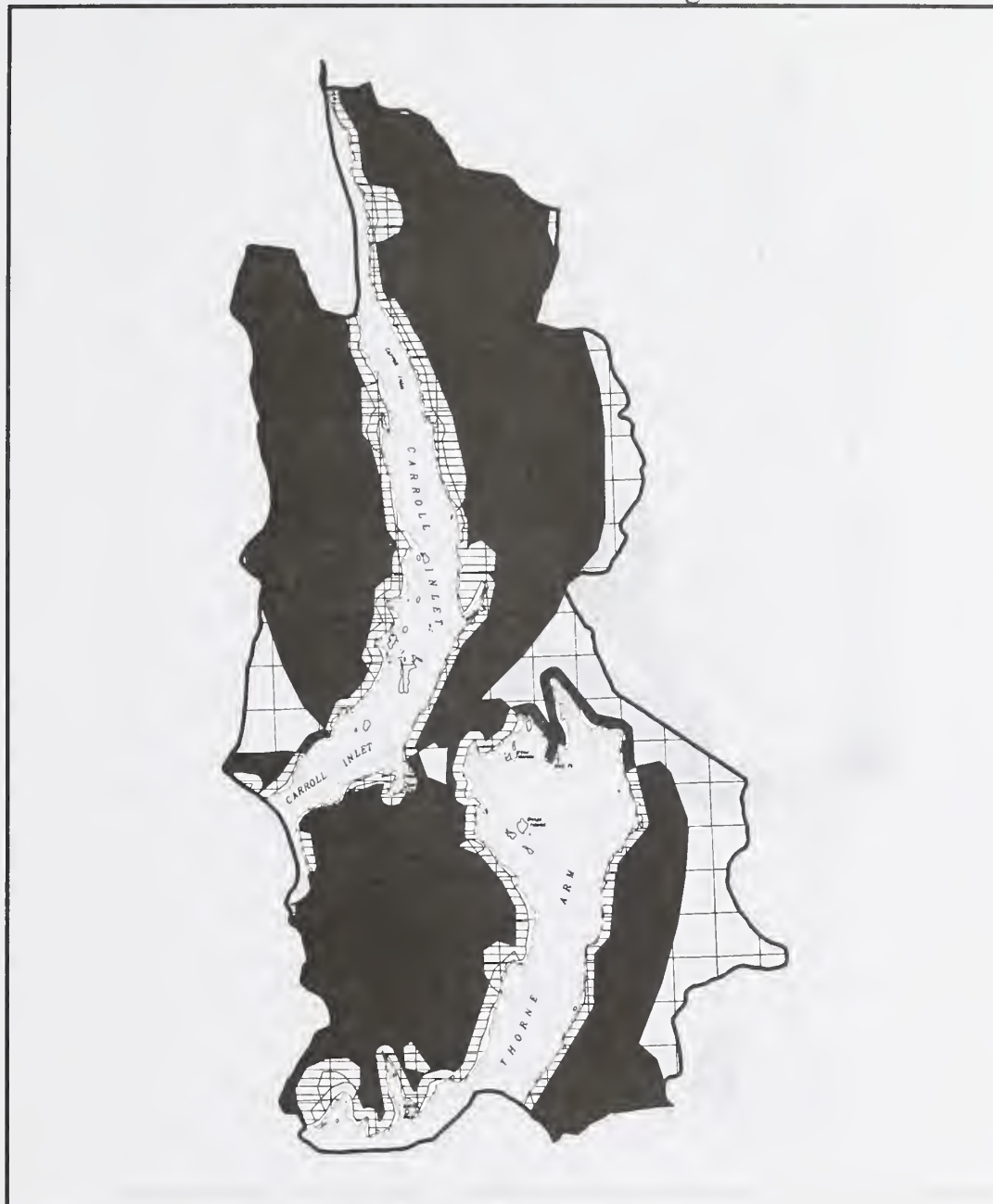
Plotting Date February 21, 1998

Mapscale 1:218872

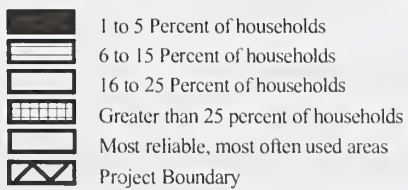


Scale is 1 Inch = 3.45 Miles

Saxman Subsistence Deer Hunting Areas



Plotting Date February 21, 1998



Source: TRUCS, 1988; GIS

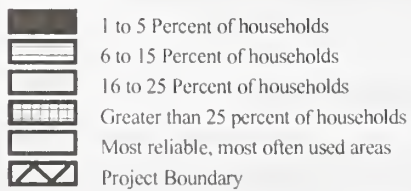
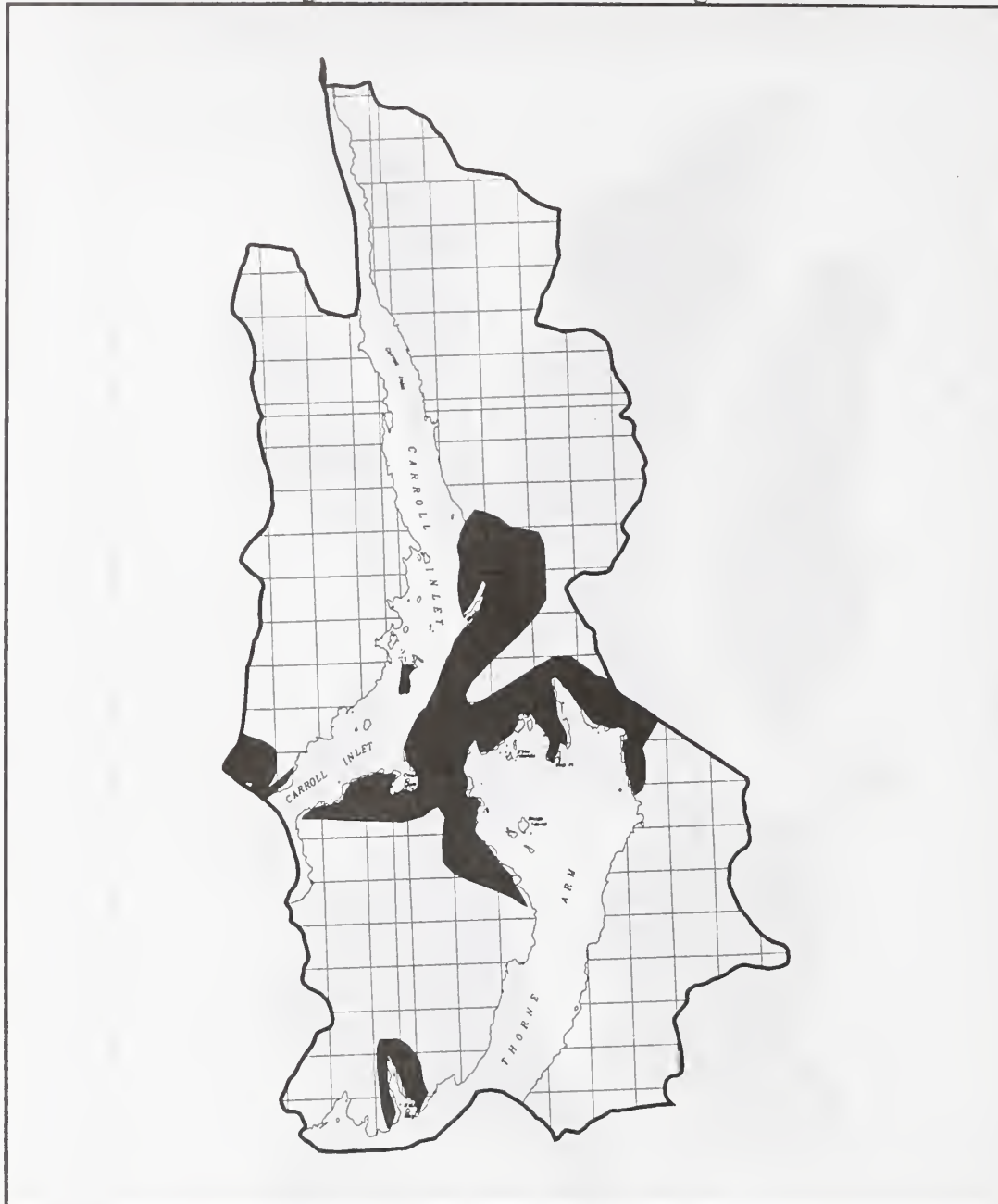
Mapscale 1:218872



Scale is 1 Inch = 3.45 Miles

B Appendix

Wrangell Subsistence Deer Hunting Areas



Source: TRUCS, 1988; GIS

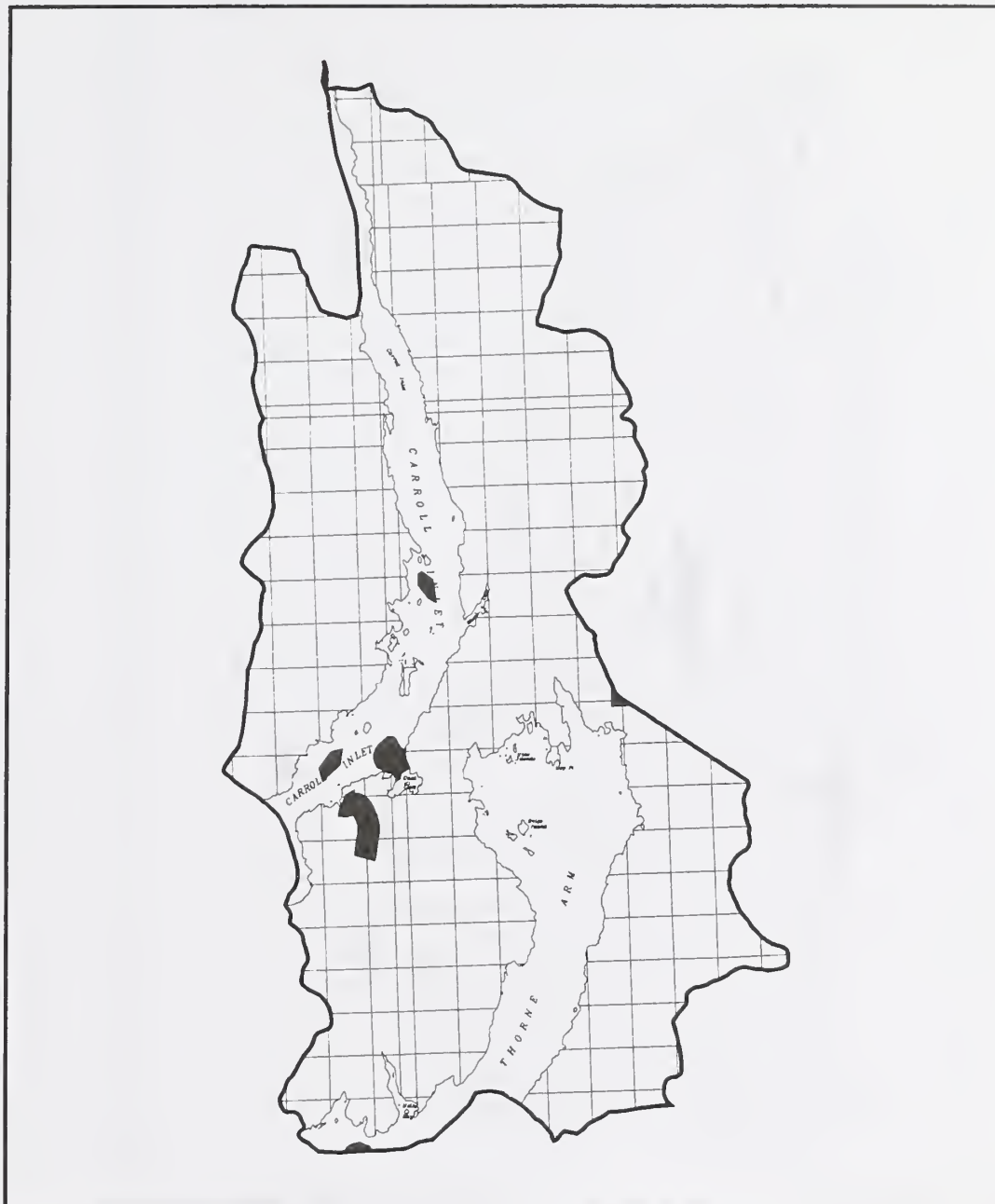
Plotting Date February 23, 1988

Mapscale 1:218872



Scale is 1 Inch = 3.45 Miles

Saxman Subsistence Finfish Areas



Plotting Date February 23, 1998

- 1 to 5 Percent of households
- 6 to 15 Percent of households
- 16 to 25 Percent of households
- Greater than 25 percent of households
- Most reliable, most often used areas
- Project Boundary

Mapscale 1:218872

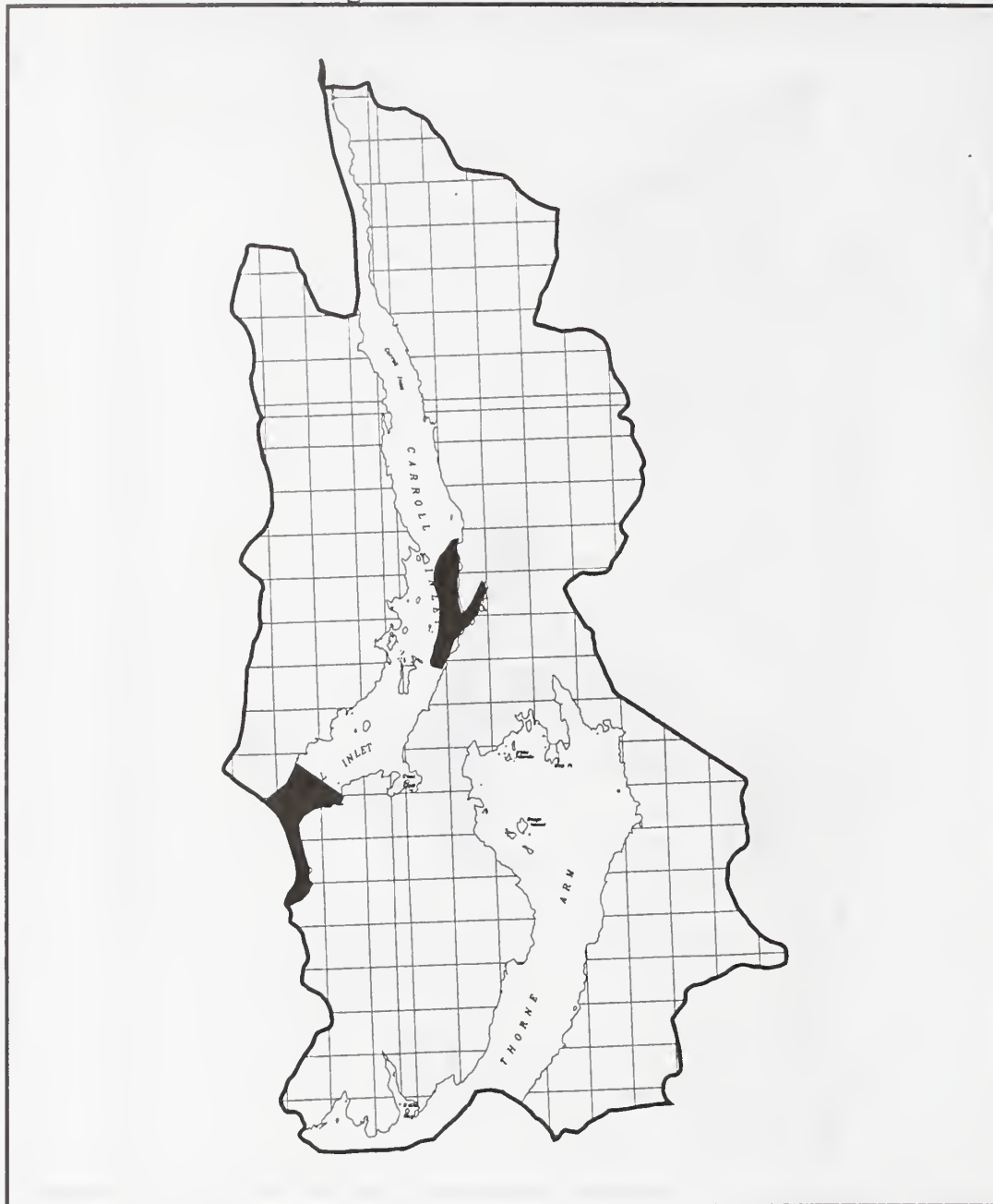


Scale is 1 Inch = 3.45 Miles

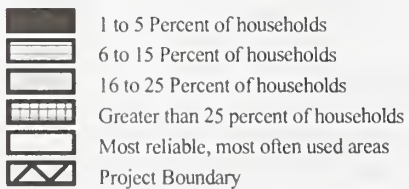
Source: TRUCS, 1988; GIS

B Appendix

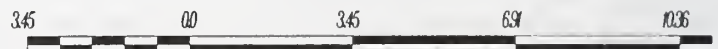
Wrangell Subsistence Finfish Areas



Plotting Date February 23, 1998



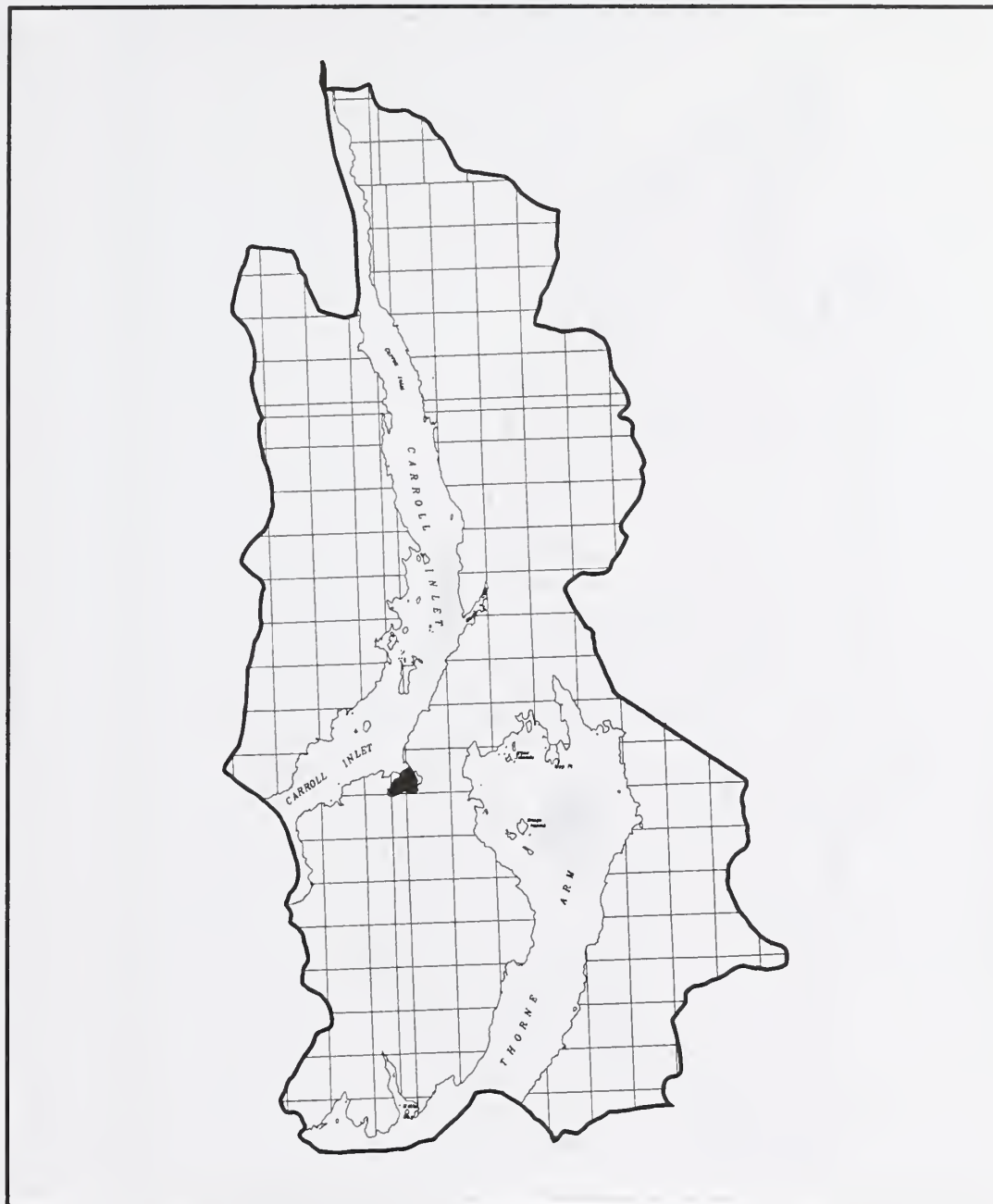
Mapscale 1:218872



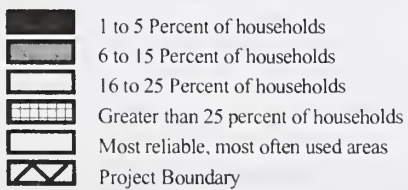
Scale is 1 Inch = 3.45 Miles

Source: TRUCS, 1988; GIS

Saxman Subsistence Invertebrae Areas



Petting Date May 15, 1997



Mapscale 1:218872

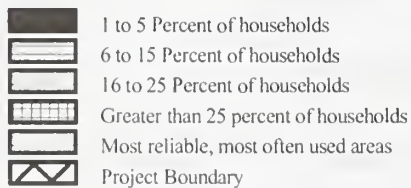
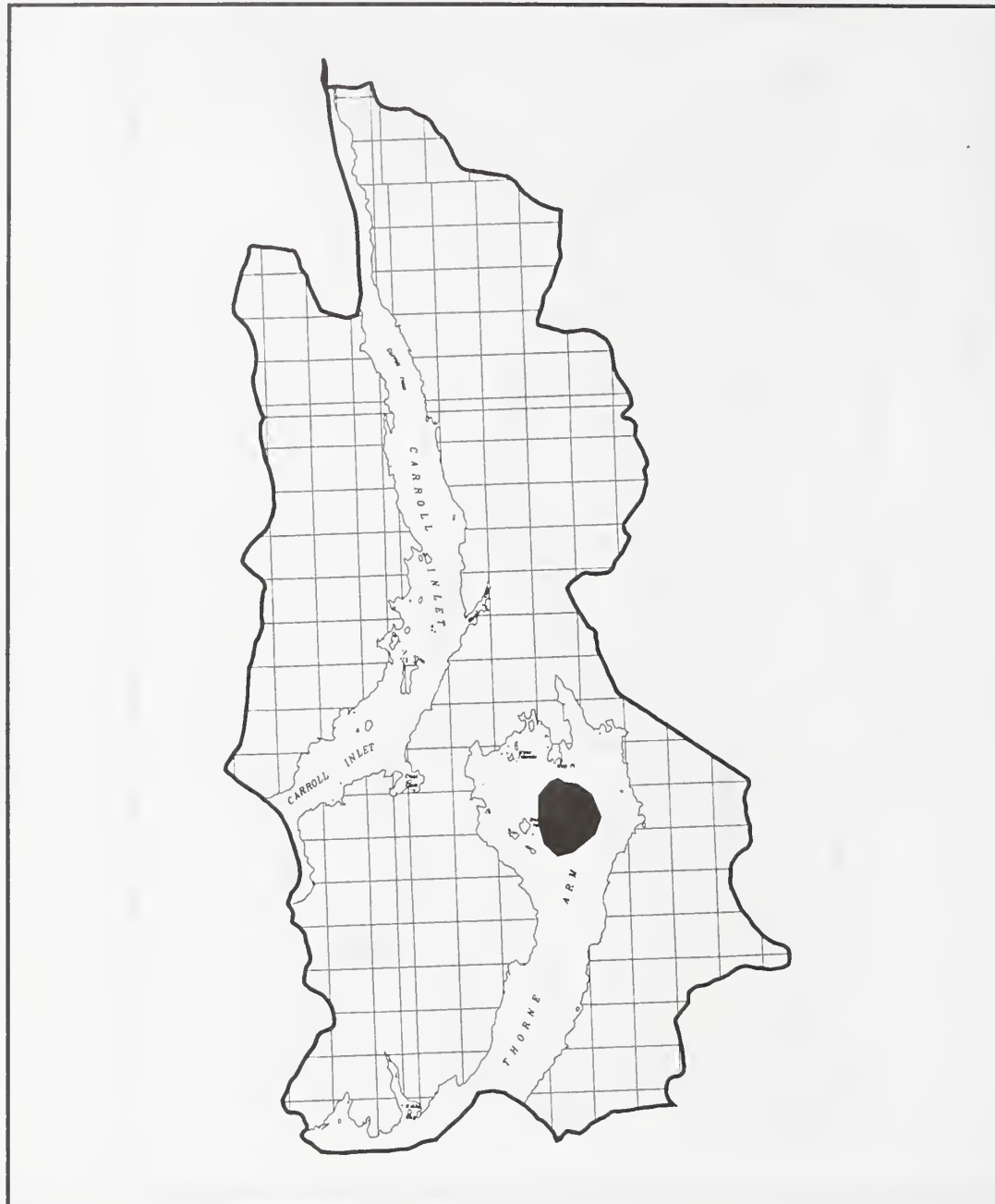


Scale is 1 Inch = 3.45 Miles

Source: TRUCS, 1988; GIS

B Appendix

Saxman Subsistence Marine Mammal Areas



Source: TRUCS, 1988; GIS

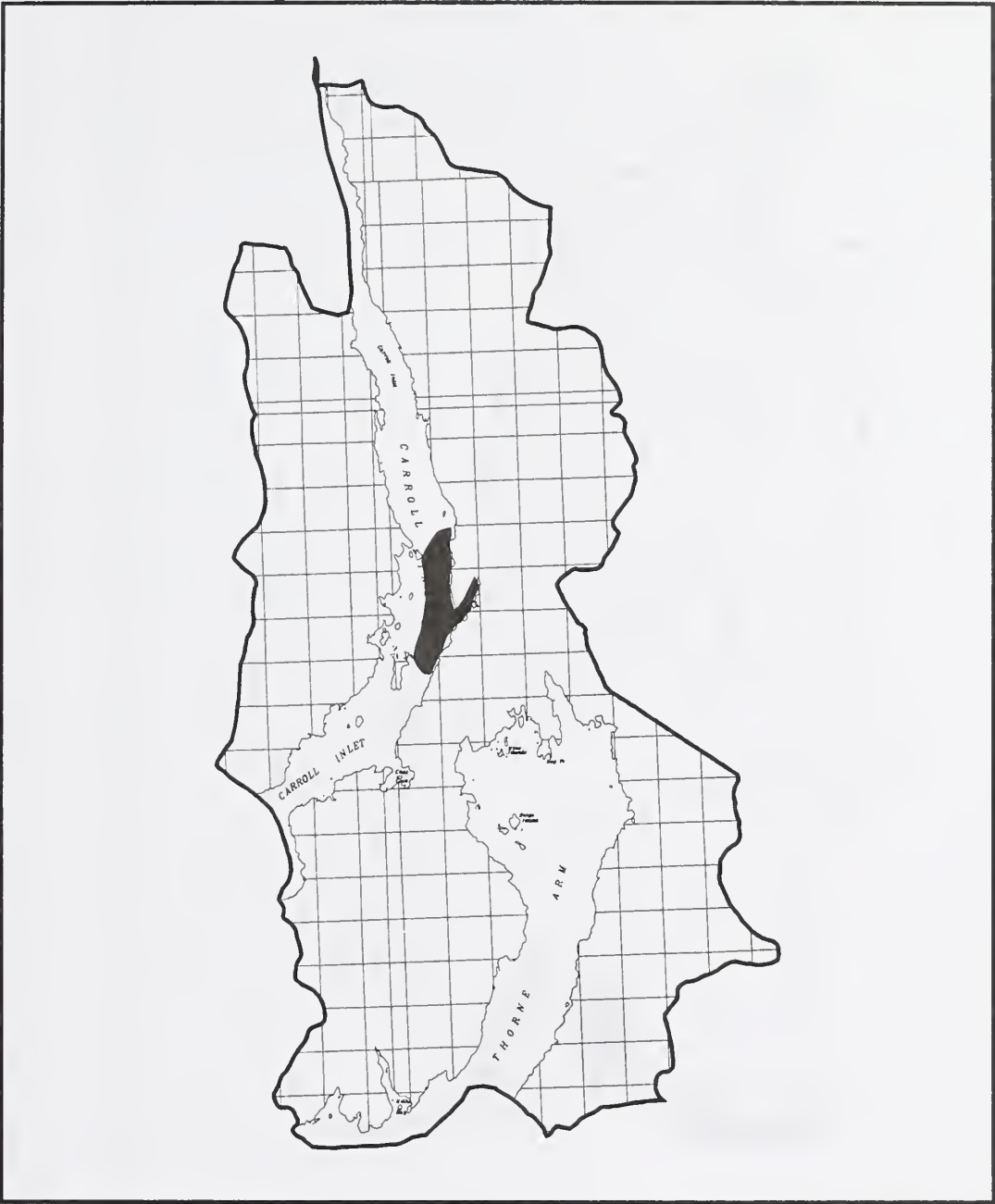
Plotting Date February 23, 1998

Mapscale 1:218872









Scale is 1 Inch = 3.45 Miles

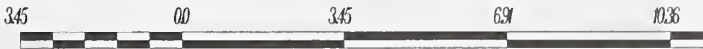
Wrangell Subsistence Marine Mammal Areas



Plotting Date February 23, 1998

-  1 to 5 Percent of households
-  6 to 15 Percent of households
-  16 to 25 Percent of households
-  Greater than 25 percent of households
-  Most reliable, most often used areas
-  Project Boundary

Mapscale 1:218872

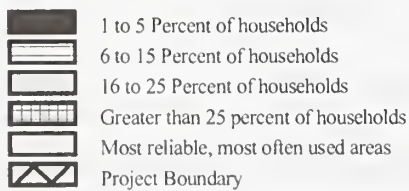
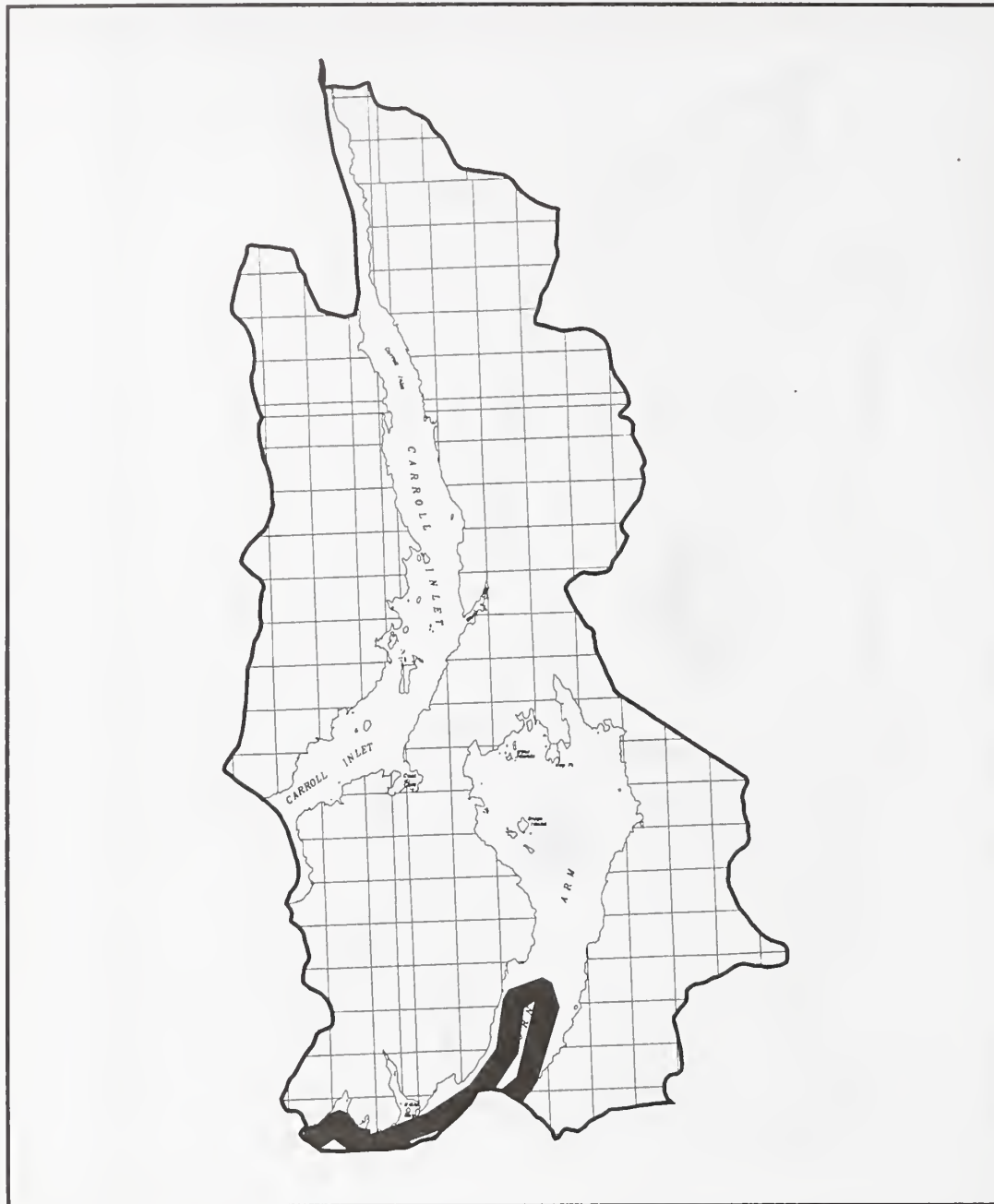


Scale is 1 Inch = 3.45 Miles

Source: TRUCS, 1988; GIS

B Appendix

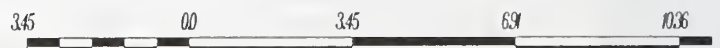
Metlakatla Subsistence Salmon Areas



Source: TRUCS, 1988; GIS

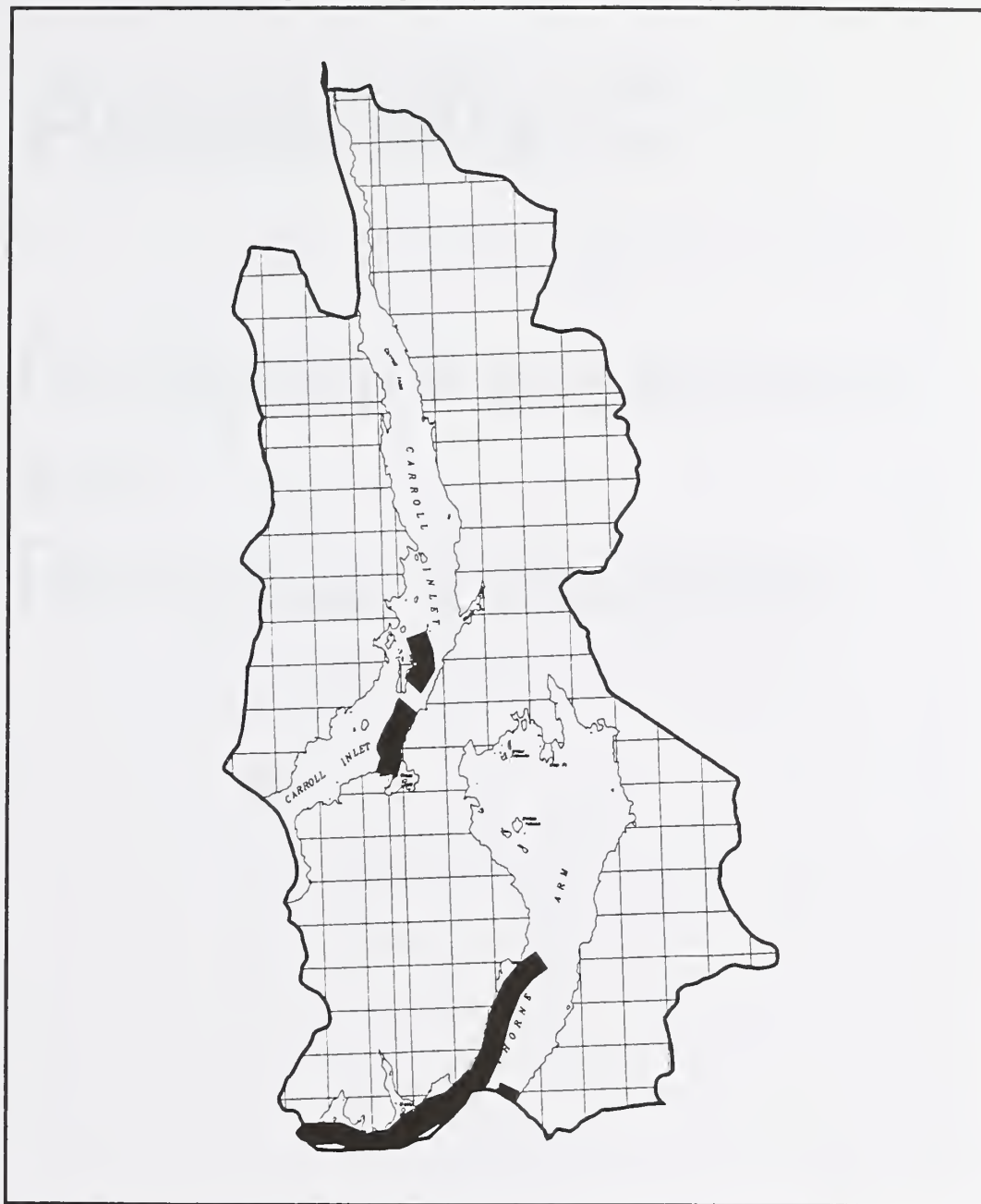
Plotting Date February 21, 1998

Mapscale 1:218872

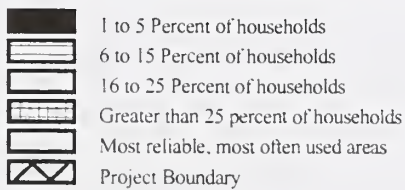


Scale is 1 Inch = 3.45 Miles

Saxman Subsistence Salmon Areas



Plotting Date February 21, 1998



Mapscale 1:218872



Scale is 1 Inch = 3.45 Miles

Source: TRUCS, 1988; GIS

Appendix C

Biological Assessment and Biological Evaluation

Optimization

Mathematical Optimization, 2nd Edition

2004

John N. Pinedo

Biological Assessment and Biological Evaluation

Threatened, Endangered and Sensitive Species

Prepared By: Kerry A. Burns
Wildlife Biologist, Ketchikan Ranger District

Approved By: _____ Date: _____
Cole Crocker-Bedford
Wildlife Biologist, Ketchikan Area, Tongass National Forest

Introduction

This combined Biological Assessment (BA) and Biological Evaluation (BE) was prepared for the Sea Level Timber Sale as required by Section 7 of the Endangered Species Act (ESA) as amended and the USDA Forest Service threatened, endangered, and sensitive, plant and animal species policy (FSM 2670). This document describes the occurrence of and project effects on species that are federally listed or proposed for threatened or endangered status. This document also serves as a BE by including equivalent information on Forest Service sensitive species. The BE is not required under ESA, but is required by the Forest Service for all internal programs and activities (FSM 2672.4).

An environmental impact statement is being prepared for the Sea Level Project Area. The action includes the harvest of between 400 and 2,800 acres of old-growth forest, construction of 10 to 58 miles of new roads, and the use of the existing log transfer facilities (LTFs) and road systems at Shoal Cove, Shelter Cove and Elf Point. The Sea Level Project includes 120,818 acres, approximately 15 miles northeast of Ketchikan, Alaska. It encompasses an area of southern Revillagigedo (Revilla) Island surrounding Carroll Inlet and Thorne Arm.

Identification of Endangered and Threatened Species and/or Critical Habitats for Such Species Within the Project Area

Federal Threatened and Endangered Species

Threatened and endangered species potentially occurring in the Project Area were identified through consultation with the US Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS). Consultation correspondences will be located in the Sea Level Project Planning Record. Table Assessment and Evaluation-1 lists the threatened and the endangered species that may occur in or near the Project Area.

Table Assessment and Evaluation-1
Threatened and Endangered Species that May Occur in or Near the Sea Level Project Area

Common Name	Scientific Name	ESA Status	Summary of BA/BE Finding
Humpback whale	<i>Megaptera novaeangliae</i>	Endangered	No effect
Steller sea lion	<i>Eumetopias jubatus</i>	Threatened	No effect
Snake River sockeye salmon	<i>Onchorhynchus nerka</i>	Endangered	No effect
Snake River spring/summer Chinook salmon	<i>Onchorhynchus tshawytscha</i>	Threatened	No effect
Snake River fall Chinook salmon	<i>Onchorhynchus tshawytscha</i>	Threatened	No effect
American peregrine falcon	<i>Falco peregrinus anatum</i>	Endangered	No effect

Source: Burns 1998.

Forest Service Sensitive Species

The Forest Service has identified sensitive plant and animal species that could potentially occur in or near the project. Table Assessment and Evaluation-2 lists sensitive species which may occur in the Sea Level Project Area.

Table Assessment and Evaluation-2
Alaska Region Sensitive Species that May Occur in the Sea Level Project Area

Common Name	Scientific Name	Summary of BA/BE Finding
Trumpeter swan	<i>Cygnus buccinator</i>	Not likely to adversely affect
Queen Charlotte goshawk	<i>Accipiter gentilis laingi</i>	May affect individuals, not likely to adversely affect population viability
Osprey	<i>Pandion haliaetus</i>	No effect
Peale's peregrine falcon	<i>Falco peregrinus pealei</i>	No effect
Goose-grass sedge	<i>Carex lenticularis</i> var. <i>dolia</i>	No effect
Edible thistle	<i>Cirsium edule</i>	No effect
Davy mannagrass	<i>Glyceria leptoctachya</i>	No effect
Wright filmy fern	<i>Hymenophyllum wrightii</i>	May affect individuals, not likely to adversely affect population viability
Truncate quillwort	<i>Isoetes truncata</i>	No effect
Calder lovage	<i>Ligusticum calderi</i>	No effect
Choris bog orchid	<i>Platanthera chorisiana</i>	May affect individuals, not likely to adversely affect population viability
Bog orchid	<i>Platanthera gracilis</i>	No effect
Loose-flowered bluegrass	<i>Poa laxiflora</i>	May affect individuals, not likely to adversely affect population viability
Straight-beak buttercup	<i>Ranunculus orthorhynchus</i> var. <i>alaschensis</i>	Not likely to adversely affect
Queen Charlotte butterweed	<i>Senecio moresbiensis</i>	Not likely to adversely affect

Source: Burns 1998.

Other Species of Concern

The USFWS and the Forest Service have identified the following species as species of concern. These species are not currently formally listed, but have been frequently discussed as a species of concern. The information on these species is provided to aid the USFWS in their efforts to track these species.

Table Assessment and Evaluation-3
Alaska Region Species of Concern that May Occur in the Sea Level Project Area

Common Name	Scientific Name	Summary of BA/BE Finding
Alexander Archipelago wolf	<i>Canis lupus ligoni</i>	May affect individuals, not likely to adversely affect population viability
Keen's myotis (Keen's long-eared bat)	<i>Myotis keenii</i>	May affect individuals, not likely to adversely affect population viability
Marbled murrelet	<i>Brachyramphus marmoratus</i>	May affect individuals, not likely to adversely affect population viability
Harlequin duck	<i>Histrionicus histrionicus</i>	May affect individuals, not likely to adversely affect population viability
Olive-sided flycatcher	<i>Cantopus borealis</i>	No effects
Spotted frog	<i>Rana pretiosa</i>	No effects
Ascending moonwort fern	<i>Botrychium ascendens</i>	May affect individuals, not likely to adversely affect population viability
Super round wedge moonwort fern	<i>Botrychium, unnamed</i>	Not likely to adversely affect
Willow, no common name	<i>Salix reticulata ssp. glabellcarpa</i>	No effects

Source: Burns 1998.

Field Surveys

BOTANICAL SURVEYS

Field assessment for the Sea Level Project Area began in 1994. Since then, all units have been visited by one or more field crews including stand exam, wildlife, archeology, fisheries, soil survey and unit reconnaissance crews. Many of these field personnel had knowledge of plants. Field crews were equipped with sensitive plant identification cards and asked to report any sensitive plants seen during the course of their duties. This method is generally ineffective at locating rare plants. In addition, six cursory plant surveys were conducted by a non-botanist surveyor in 1996.

A more intensive survey was undertaken in 1997 during which a botanist conducted 16 surveys, assessing 15 proposed harvest units and 1.5 miles of proposed road (See Map 2). Surveys in 1997 followed the "Inventory Protocols for Sensitive and Rare Plants for the Ketchikan Area". The protocol calls for use of the Intuitive Controlled survey method, the standard method for botanical surveys on National Forest Lands. The detailed methods and results of botanical surveys, along with transect routes, can be found in the Planning Record (P.A. Woolwine, October 17, 1997 report).

During prefield review, units and roads were selected for surveying according to two criteria: 1) Units and roads were prioritized based on their greater probability for harvest, and 2) Aerial photos were then examined for high-likelihood sensitive plant habitats in and adjacent to the units and roads.

GOSHAWK SURVEYS

The objective of goshawk surveys in the Project Area was to locate goshawk nest sites. Knowledge of nest site locations allows for goshawks to be more accurately considered during project alternative development and analysis. Standards and guidelines will be applied to any discovered nests.

Goshawk surveys followed the protocol established for the Alaska Region Goshawk Inventory Protocol, first issued June 24, 1992. Areas with reported goshawk sightings were the first priority for surveys. Sightings ranged in confidence level from low to high. Some reports were for raptors in general. Wildlife crews usually investigated these sightings, if possible, because we felt even a slight possibility of observing a goshawk increased the chances of finding a nest. Reports of sharp-shinned hawks and red-tail hawks were not normally pursued.

Surveys included time spent observing from vantage points. If the protocol station fell at a good vantage point, field crews would often spend 30 minutes or an hour sitting and looking for goshawks. We felt this increased our chances of spotting a goshawk. If a goshawk was spotted, we could then concentrate our surveys in that direction.

While this method is the best available at this time, it does not guarantee that all nests will be found. In fact, we suspect many nests are not found, even if the surveys are conducted close to the nest.

Field crews completed surveys along 84 routes (transects) (see Map 1) that included 505 broadcast stations. Approximately 387 call stations were located in or adjacent to potential harvest units. Of the total potential unit pool (245 units), 103 potential harvest units contained at least one call station. Field crews found no goshawk nests. A crew recorded one possible goshawk detection on 6/28/95 near Unit 21, but conditions were such that they could not positively identify the raptor. The crew reported another raven-sized raptor detection in the same area on 7/25/95. Crews found plucking posts in Units 98 and 66, but they could have been from a sharp-shinned hawk since the prey species were quite small.

District records and databases indicate several incidental goshawk sightings within the Project Area. The two most dependable sightings, both in 1996, were reported about 1,000 feet east of Unit 60 and near Unit 45. Wildlife crews surveyed these areas in 1996 but did not locate a nest or record additional goshawk detections. The crew recorded a red-tailed hawk vocal detection near Unit 60 on 8/6/96.

MARbled MURRELET SURVEYS

We completed dawn counts at seven sites to check presence or absence of marbled murrelets. Surveys at each station followed the protocol for inland intensive dawn counts (Paton et al. 1990). Crews detected murrelets at all but one site. The Sea Level Creek area (VCU 7552) showed the most detections of the areas surveyed; however, the surveys in Sea Level Creek were completed in late July when the detection rate is typically at its peak. This could account for the higher number of birds detected there. The data are insufficient to suggest higher concentrations of murrelets in different parts of the Project Area.

AMPHIBIAN SURVEYS

Field crews conducted surveys in April, May, and June when spotted frogs are most active. Minnow traps were baited with minced clams and set in appropriate habitats. The bait was

placed in perforated zip-loc bags. Traps were placed in areas with submerged or partially emergent aquatic vegetation. Traps were left overnight, sometimes 2 days, before retrieval.

Surveys were concentrated in shallow, fresh water habitat along slow moving streams, including ponds, lakes, and side channels along fresh water streams. Surveys were located in the highest value habitat with the highest probability of finding spotted frogs, whether or not in a harvest unit or road right-of-way.

Field crews set 10 traps at 6 locations in 1996 and 12 traps at 4 locations in 1997. A total of 22 traps were set for a total of 34 trap nights. Numerous rough-skinned newts were captured, but no spotted frogs were captured.

INCIDENTAL OBSERVATIONS

There are a number of other species in the Project Area about which we wanted to know more information, but did not feel species specific surveys were justified or cost effective. Some species have the Tongass Land Management Plan (TLMP 1997) Standards and Guidelines while others are USFWS Species of Concern or Region 10 Sensitive Species.

The objectives of recording incidental observations were:

- To be able to update the existing database (for example, trumpeter swans, marine mammal haulouts, etc.);
- To document key sites, such as dens or nests, that were discovered within the Project Area; and
- To supplement data collected during protocol surveys.

We encouraged all field-going personnel to report desired wildlife observations through the use of standard wildlife observation cards and discussions with wildlife biologists. Listed below are the species which we encouraged people to report immediately so biologists could follow up on the reports as soon as possible.

Osprey
Great blue heron rookeries
Goshawk
Peregrine falcons
Large (12"-36") stick nests (not eagles)
Marbled murrelet eggs or nests
Spotted frogs

Listed below are additional species we encouraged all crews to report. Timeliness of the report was less critical for these species. We did not follow up with a visit for most of these observations.

Trumpeter swans
Whale observations
Harlequin ducks
Wolf dens, sightings or howling
Canada goose
Bear dens or concentrations
Sand Hill crane
Wolverine
Band-tailed pigeon
Mountain goats

Olive-sided flycatcher
Bald eagle nests

This method of field survey is useful in documenting presence of a species, but does not document absence of a species or the density of a species. Many undiscovered individuals or nests can occur in the Area. However, field personnel frequently work in the Sea Level Area. Therefore, many of the larger, more easily identified species are often reported as incidental observations.

Incidental observations included six possible goshawk sightings, none of which could be confirmed. Crews reported 15-25 seals hauled out in Thorne Arm near Snipe and Minx Islands. Crews reported two olive-sided flycatcher observations. Crews reported trumpeter swans at Gnat Cove, North Saddle Lakes, and Low Lake. Wolves were reported in most parts of the Project Area.

Threatened and Endangered Species Assessments

Humpback Whale

Humpback whales are the most abundant of the eight species of endangered whales that occur in Southeast Alaska waters. Their population in the North Pacific is about 1,200, which is about 8 percent of the prewhaling population. These whales are regularly sighted in the Inside Passage and coastal waters of the Southeast Alaska panhandle from Yakutat Bay south to Queen Charlotte Sound. Humpback whales feed in Southeast Alaskan panhandle waters from about May through December, although some have been seen every month of the year. Peak numbers of whales are usually found in nearshore waters during late August and September, but substantial numbers usually remain until early winter. Baker et al. (1985) estimate that 300 to 350 humpback whales inhabit Southeast Alaska during the summer and fall.

The local distribution of humpbacks in Southeast Alaska appears to be correlated with the density and seasonal availability of prey, particularly herring (*Clupea harengus*) and euphausiids. Important feeding areas include Glacier Bay and adjacent portions of Icy Strait, Stephens Passage/Frederick Sound, Seymour Canal and Sitka Sound. Glacier Bay and Icy Strait appear to be an important feeding area early in the season, when whales prey heavily on herring and other small, schooling fishes. Frederick Sound is important later in the summer, when whales feed on swarming euphausiids. During autumn and early winter, humpbacks move out of the Sound to areas where herring are abundant, particularly Seymour Canal. Other areas of Southeast Alaska may also be important for humpbacks and need to be evaluated. These include: Cape Fairweather, Lynn Canal, Sumner Strait, Dixon Entrance, the west coast of Prince of Wales Island, and offshore banks such as the Fairweather Grounds.

Because the humpback inhabits shallow coastal areas, it is increasingly exposed to human activity. Consequently, these whales may be more susceptible to confrontational disturbance, displacement, and loss of habitat from environmental degradation than some other whale species. Humpbacks summering in Southeast Alaska have been linked to three wintering areas in Mexico, Hawaii, and Japan.

The recovery plans for the humpback whale identified six, known or potential, categories of human impacts to these species: hunting, entrapment and entanglement in fishing gear, collisions with ships, acoustic disturbance, habitat degradation, and competition for resources with humans.

National Forest management activities which may have an affect on whale habitats or populations gencrally fall into the categories of acoustic disturbance and habitat degradation. These management activities include: the development and use of LTFs and their associated camps, the movement of log rafts from LTFs to mills, and the potential dcvelopment of other docks and associated facilities for mining, recreation, and other forest uses and activities. Generally, with the development and use of LTFs and other docking facilities for projects, there is an associated increase in recreational boating in the immediate vicinity during the construction and use of the facilities.

Most of the information and data for whales in Southeast Alaska are associated with one species, the humpback whale, because it is the most abundant whale to occur in Southcast Alaska waters. The other seven species of whales are either present only seasonally as they migrate along the outer coastal areas, or are only occasionally found in the inside coastal waters of Southeast Alaska. The following discussion and analysis is primarily based on humpback whales, but is assumed to be applicable to the other species of whales.

Construction and operation of LTFs and other docking facilities are restricted to small, very localized areas of the marine environment. There are three LTFs currently on the Project Area (Elf Point in Thorne Arm, and Shoal Cove and Shelter Cove in Carroll Inlet). An estimated 2 acres of marine benthic disturbance associated with these existing LTFs could occur as a result of bark deposition. The LTFs were designed to maximize flushing of suspended bark away from the LTF area to the open sea before it can accumulate on the bottom.

There is little potential to directly affect whales with these facilities. During the summer of 1989, there was a report of a humpback whale entangled in some cables from an inactive LTF site on the Stikine Area. This is the only known direct effect incident related to LTFs.

Two potential indirect effects of LTFs, other docking facilities and associated activities have been identified: 1) effects on whale prey species, and 2) disturbances of whales by boat traffic associated with LTFs.

Effects on Prey

Nemoto (1970) noted that euphausiids and gregarious fish are the primary prey of humpbacks. Thirteen species of fish and 57 species of invertebrates were identified as humpback whale prey in Southeast Alaska. Humpbacks studied in Glacier Bay and Stephens Passage-Frederick Sound were found most frequently in areas of high prey density (Wing and Krieger 1983).

Construction and operation of all LTFs and similar facilities require U.S. Army Corps of Engineer and U.S. Environmental Protection Agency permits, and State of Alaska tidelands permits. The permitting process provides that construction and operation maintain water quality in the specific facility locations, and that marine circulation and flushing are maintained. All facilities must be in conformance with permit standards. Although the effects may vary locally, the major effect of leachates (ie. terpene, alpha-conindentric acid, alpha-conindentrin, hydroxymatairesinol, linoletic acid, and dehydroabientic acid) from stored log rafts, is upon invertebrates. Crustaceans, shrimp, and crab larvae, seem especially sensitive (Pease 1973, Buchanan and Tate 1976). EPA measuring techniques may be required to monitor the LC50 levels at each LTF (Peltier and Weber 1985) in order to insure impacts are limited to the approved "zone of deposit".

Effects from Disturbance

Humpback whale response to nearby boating activity varies from no apparent response to pod dispersal, sounding, brcaching, evasive underwater maneuvers, and maintaining distance (Baker and Herman 1983, Baker et. al. 1982). Disturbance by boat activity has been suggested as one of the possible causes of observed changes in whale distribution in Southeast

Alaska. Direct pursuit of whales by boats, and frequent changes in boat speed and direction appear to elicit avoidance behaviors more frequently than other types of boat traffic. However, whales may readily habituate to constant and familiar noise (Norris and Reeves 1978). Whales can be commonly found in some areas of Southeast Alaska which have considerable boat traffic. Whether they are habituated to boat traffic has not yet been documented. Adverse effects from current levels of boat traffic have not yet been documented.

Two basic types of boat activity associated with LTFs are log raft towing and recreational boating by workers. Log raft towing frequency would vary between camps, seasons, and years, with an average of about once a week during the working season (USDA Forest Service 1989). Tug boats maintain relatively constant speeds and directions during log raft towing; constant speed and direction elicit less avoidance behavior from whales than other types of boating activity. Log raft towing routes are generally well established, and adverse effects from log raft towing have not been documented.

Recreational boating activity by camp residents would vary between seasons, years, and camps of different sizes. This activity would be concentrated near LTF sites, other docking facilities, and camps. It is estimated that most recreational boating would occur within a few miles of the site, few trips would be made over 10 miles, and activity greater than 30 miles from a site would be negligible. This boating would involve frequent changes in speed and direction and may include some small amount of whale pursuit, if the whales are within sight of the camp or an occupied boat. The effect of such recreational activity on whales would depend on many factors such as size of the bay, depth of the waters in the bay, number of boats, individual behavior responses of the whales, etc. At the present time, there is not a quantifiable way to estimate these possible effects.

The following Forest-wide Standards and Guidelines have been developed for the TLMP (1997) and are incorporated into the Sea Level EIS by reference:

- 1) Provide for the protection and maintenance of whale habitats, and
- 2) Ensure that Forest Service permitted or approved activities are conducted in a manner consistent with the Marine Mammal Protection Act, the Endangered Species Act, and NMFS regulations for approaching whales, dolphins, and porpoise. "Taking" of whales is prohibited; "taking" includes harassing, pursuing, or attempting any such activity.

No adverse effects on whales from implementation of Forest management activities are anticipated. Indirect effects may be associated with possible increased boating activity, but compliance with Forest Service and NMFS standards and guidelines should partially mitigate any adverse effects on whales resulting from the proposed timber sale alternatives. The Forest Service has no control over the routes taken by tugboats with log rafts, nor does the Forest Service control recreational boating activities.

Steller Sea Lion

The Steller (northern) sea lion ranges from Hokkaido, Japan, through the Kuril Islands and Okhotsk Sea, Aleutian Islands and central Bering Sea, Gulf of Alaska, Southeast Alaska, and south to central California. There is not sufficient information to consider animals in different geographic regions as separate populations. The centers of abundance and distribution are the Gulf of Alaska and Aleutian Islands, respectively.

In 1990, because of an abrupt population decline observed over the last 31 years (primarily in the former Soviet Union, Gulf of Alaska, and Aleutian Islands), the NMFS listed the Steller sea lion as a threatened species throughout its range. The number of sea lions observed on certain rookeries from Kenai Peninsula to Kiska Island declined by 63 percent since 1985 and by 82 percent since 1960. Significant declines have also occurred on the Kuril Islands.

Information on population trends in Southeast Alaska is sketchy, but what data does exist suggests that Southeast populations are stable or perhaps slightly decreasing.

The cause of overall population decline has not been confirmed. However, incidental mortality of sea lions in commercial fishing gear, shooting by fishermen, and reduced prey species due to commercial fishing operations, have probably contributed significantly to declines (Reeves et al. 1992).

When the sea lion was given emergency listing as a threatened species in the Federal Register (April 5, 1990), buffer zones restricting human activities were established around rookeries west of 150 degrees west longitude (does not include Southeast Alaska). The closest Steller sea lion rookery to the Sea Level Project Area is on Forrester Island, west of Prince of Wales Island. A sea lion haulout used for sunning and resting occurs on Grindall Island, off the south tip of Kasaan Peninsula. It is not designated as critical habitat. A recovery team has prepared a draft recovery plan.

Important food resources include walleye pollock, salmon, eulachon, and cephalopod mollusks. Steller sea lions forage predominantly in nearshore areas and over the continental shelf.

The NMFS provides a summary of factors affecting the Steller sea lion (Federal Register April 5, 1991). These factors include reductions in the availability of food resources, especially pollock, which is the most important prey species for sea lions; commercial harvests of sea lion pups; harvests for subsistence, public display and scientific research purposes; predation by sharks, killer whales, and brown bear; disease; the inadequacy of existing regulations regarding quotas on the incidental harvesting of sea lions during commercial fishing operations; and other natural or human incidences such as shooting adult sea lions at rookeries, haulout sites, and in the water near boats. None of these factors are regulated by or within the jurisdiction of the Forest Service.

Southeast Alaska populations of Steller sea lions have not declined to the extent that other populations have. Harassment or displacement of sea lions from preferred habitats by human activities such as boating, recreation, aircraft, LTFs, log raft towing, etc., is a concern with regard to long-term conservation of the sea lion in Southeast Alaska. Forest-wide Standards and Guidelines direct the Forest Service to prevent and/or reduce potential harassment of sea lions and other marine mammals due to activities carried out by or under the jurisdiction of the Forest Service, and these will be incorporated by reference into the Sea Level EIS from the TLMP (1997). These Forest-wide Standards and Guidelines are as follows:

1. Protect Steller sea lion habitats;
2. Ensure that Forest Service permitted or approved activities are conducted in a manner consistent with the requirements, consultations, or advice received from the appropriate regulatory agencies for the Marine Mammal Protection Act, the Endangered Species Act, and NMFS guidelines for approaching seals and sea lions. "Taking" of marine mammals is prohibited; "taking" includes harassing, pursuing, or attempting any such activity;
3. Locate facilities, camps, LTFs, campgrounds, and other developments 1 mile from known haulouts, and, farther away, if the development is large; and
4. Cooperate with State and other Federal agencies to develop sites and opportunities for the safe viewing and observation of marine mammals by the public. Maintain a public education program explaining Forest management activities related to marine mammals in cooperation with State and other Federal agencies.

No direct effects on sea lions from Forest management activities are anticipated. Indirect effects may be associated with possible increased boating activity, but compliance with these standards and guidelines should mitigate any adverse effects on sea lion populations or their habitats for any of the alternatives.

Fish

The presence of threatened or endangered Pacific Northwest salmon is not documented for salt waters near the Sea Level Project Area, but their occurrence is possible. Pink, chum, and coho salmon occur in Project Area fresh waters, however, Chinook and sockeye salmon do not. The application of Forest Standards and Guidelines will be adequate to protect stream fishery resources in the Project Area. Some increased boating activity may occur between Ketchikan and Carroll Inlet and Thorne Arm and logs may be towed to town, but due to infrequent occurrence, this increased activity will not impact these salmon stock. Based on this information, there will be no effects on Snake River sockeye salmon, Snake River spring/summer Chinook salmon, or Snake River fall Chinook salmon.

American Peregrine Falcon

The American peregrine falcon is primarily associated with interior Alaska for breeding, nesting, and rearing of young. The falcon is highly migratory, wintering as far south as northern Argentina and occurring in Southeast Alaska only during migration periods. Reproduction has increased population numbers three-fold in Alaska. Population numbers of the American peregrine falcon are continuing to increase (Ambrose, et al. 1988). In coastal areas of Washington, the primary prey species for peregrine falcons were shorebirds and waterfowl species; passerines were also identified in the diet (Anderson and Debrun 1979; Anderson et al. 1980).

The TLMP (1997) contains standards and guidelines for protecting waterfowl and shorebird habitats. These standards and guidelines are incorporated into the Sea Level Project. Due to the fact that the project will not impact seabird rookeries or waterfowl concentrations, no adverse effects are anticipated from the project on American peregrine falcons.

Sensitive Species Evaluations

Trumpeter Swans

The breeding range of the trumpeter swan is concentrated along the Alaska Gulf coast and other wetland areas in central and southern central Alaska (Bellrose 1980). There are no known trumpeter swan nesting pairs on the Ketchikan Ranger District. Therefore, there are no concerns for conflicts with breeding trumpeter swans with this project.

Trumpeter swans breeding in Alaska, winter along the Pacific Coast from the Alaska Peninsula to the mouth of the Columbia River (Bellrose 1980). Each year many swans pass through the Ketchikan Area in the spring and fall during migration to and from their breeding grounds. Records show swans using Gnat Cove during the winter and during spring and fall migration. There are a few records of swans using Low Lake. Field crews have reported swans occasionally using some of the smaller ponds in the Project Area during migration periods. Swans that spend the winter here usually move to large estuaries such as Carroll River once the weather turns cold.

Field personnel have not reported swans in the summer. They arrive in the area in mid-October as they are migrating south. Numbers increase as migration continues. Swans typically leave for their breeding area by mid-April.

The Sea Level Project incorporates the Forest-wide Standards and Guidelines for significant waterfowl areas, beach fringe and estuary fringe. Harvest activities in Units 48 and 173 will be limited to April 1 to November 1 to protect wintering trumpeter swans. These standards and guidelines will protect swan habitats from disturbance.

Queen Charlotte Goshawk

Based on the above information, this project is not likely to adversely affect the overall swan population in Southeast Alaska.

The American Ornithologists Union (AOU) recognizes two subspecies of the northern goshawk in North America—*Accipiter gentilis atricapillus* and *A.g. laingi*, the Queen Charlotte goshawk (AOU 1957). Taverner (1940) first described the darker plumaged Queen Charlotte goshawk as a distinct race occurring in the coastal temperate rainforests of the Queen Charlotte Islands and Vancouver Island, British Columbia. Webster (1988) found that the Queen Charlotte goshawk occurred from Vancouver Island north to the Taku River near Juneau. The northern goshawk and Queen Charlotte goshawk are identified as Species of Concern throughout their ranges.

On May 9, 1994, the USFWS received a petition, from the Southwest Center for Biological Diversity and numerous copetitioners, to list the Queen Charlotte goshawk as endangered pursuant to the Endangered Species Act. On August 19, 1994, the USFWS found that the information presented by the petitioners together with the information in USFWS files was substantial and indicated that listing may be warranted. Therefore, a status review of the species was initiated. After seeking public comments and reviewing all the available information on the goshawk, a finding was issued June 28, 1995, that protection under the Endangered Species Act is not warranted at this time for the Queen Charlotte goshawk. Since that time the courts have directed the USFWS to reconsider their determination. The USFWS recently determined that the goshawk did not warrant listing.

The goshawk is a wide-ranging forest raptor that generally occurs in low densities, from 2.4 pairs (Central Alaska, McGowan 1975) to 11.0 pairs (Arizona, Crocker-Bedford and Cheney 1988) per 100 square kilometers, although population densities in Southeast Alaska may be much lower (Crocker-Bedford 1992). The most recent estimates of the goshawk population in Southeast Alaska range from 100 to 381 pairs (USDA Forest Service 1991a; Crocker-Bedford 1994), to 100 to 800 pairs (Alaska Interagency Goshawk Committee, Report of June 30, 1994).

The primary concern for goshawk population viability is habitat loss due to timber harvest. Recent results of studies within the range of the Queen Charlotte goshawk (ADF&G 1993, Titus et al. 1994), indicated a greater frequency of relocations of radio-tagged goshawks in mature and old-growth forest. Of 18 nest trees for which habitat attributes were characterized, 16 were in old-growth and two were in second-growth trees greater than 90 years of age. Of 661 radio relocations, over 90 percent were in habitat classified as Volume Class 4 (8 to 20 MBF per acre) or greater and 68 percent were in habitats classified as Volume Class 5 (20 to 30 MBF per acre) or greater (Titus et al. 1994).

Reynolds (1983) reported home ranges to be 2,000 to 3,200 hectares. These home ranges may include a mosaic of habitat types, with a strong preference for mature forest with flight space beneath the canopy (Reynolds 1989, USDA Forest Service 1990). Home range size is strongly dependent upon quality of the foraging habitat and prey availability (Kenward 1982). Titus et al. (1994) reported breeding period home ranges for 16 individual adult goshawks in Southeast Alaska to be as large as 19,613 hectares and year-round home ranges as large as 114,728 hectares.

A recent review of the Queen Charlotte goshawk summarized habitat use as follows (Crocker-Bedford 1994):

"Analyses of habitat use have shown similar results throughout the geographical range of the northern goshawk in the United States. Home ranges include stands of large trees for nesting, as well as for greater abundance of some prey. The higher canopy provided by large trees, along with sparser than normal shrubs and small trees, appears to facilitate

goshawk flight and prey capture. Closed canopies appear to provide preferred microclimate in the nesting stand, increased productivity of some important prey species, and reduced competition and predation by open-forest raptors. A literature review indicated that goshawk densities tend to decrease with the amount of timber harvest, and that goshawks may sometimes be impacted by forest fragmentation. In Southeast Alaska 92 percent of the relocations on radio-tagged goshawks were in old-growth forests having over 8 mbf/ac. Old-growth having over 20 mbf/ac. was most preferred."

Goshawks generally select forest stands with large trees on gentle slopes at lower elevations for nesting and foraging (Reynolds 1989, USDA Forest Service 1990). Foraging habitat is generally characterized by a greater diversity of age classes and structural characteristics (e.g., snags, woody debris) than nesting areas; foraging areas also comprise the largest percentage of goshawk home ranges (Reynolds et al. 1991).

Goshawk sensitivity to timber harvest resulted in management recommendations to protect nest site integrity (USDA Forest Service 1990, USDA Forest Service 1991a, USDA Forest Service Alaska Region 1992 and 1994). Other management recommendations recognized the importance of the foraging area within the post-fledging area (Kennedy 1989, Crocker-Bedford 1990, USDA Forest Service 1991a, and USDA Forest Service Alaska Region 1992 and 1994). There is now widespread recognition of the importance of most foraging habitat, including areas far from the nesting site (Reynolds 1989, USDA Forest Service 1990, Crocker-Bedford 1990, 1991, 1992, 1994a and 1995, Marshall 1992, Reynolds et al. 1991, USDA Forest Service Alaska Region 1994, Iverson et al. 1996).

The value of clearcut stands for goshawk nesting or foraging is very low. Landscapes with large portions of early seral forest reduce cumulative landscape habitat quality (Assessment of the Northern Goshawk for the TLMP Revision). Harvesting of units in the Sea Level Project Area would increase the amount of early seral forest, thus reducing the cumulative landscape habitat quality.

Since 1992, more inventory effort has been spent to find goshawks than any other animal in Southeast Alaska. Twenty-one goshawk nest areas were documented in Southeast Alaska with activity between 1990 and 1993 (Titus et al. 1994). At least one nest site was located at 18 of these areas, including 8 active nests in 1993. In 1994, a total of 33 historic and current sites with at least one nest were documented; active nests were located at 21 of these sites (ADF&G 1994). Despite searches in new locales, and following radioed birds to 5 new sites in 1995, the number of known, occupied nest sites decreased from 21 to 10 between 1994 and 1995 (Iverson et al. 1996).

No known goshawk territories are located within the Project Area. Any pairs of goshawks not discovered prior to timber harvest may be affected if the harvest units correspond to key stands of habitat. Any goshawk nest found prior to harvest will be protected utilizing the TLMP goshawk standards and guidelines. Although the buffer may be adequate if only 3 percent of the old growth of a drainage is harvested in any one decade (Iverson et al. 1996), the nest site will likely not be occupied long after timber harvesting if large amounts of harvest occur in the surrounding watersheds (Crocker-Bedford 1990, 1991, 1994 and 1995; Patla 1991, Reynold et al. 1991, Marshall 1992, Woodbridge and Detrich 1994, Harward et al. 1995).

It is determined that this project may affect individual northern goshawks if timber harvest activities or roads correspond with goshawk nesting stands or important foraging habitats which have not been identified. This determination is based on the following factors:

- Goshawks are dependant on old-growth forest characteristics.
- Goshawks are sensitive to timber harvest, and habitat values in clearcut stands are generally very low.
- The Project Area has received a substantial amount of prior timber harvest.
- Harvesting of the units in the Sea Level Project would increase the amount of early seral forest, thus reducing the cumulative landscape habitat quality.

Mitigation

All units laid out for the Sea Level Project will follow the TLMP Forest-wide Standards and Guidelines. The Project will also follow the TLMP strategy for maintaining viable wildlife populations. It is assumed these strategies will be sufficient to maintain goshawk populations; therefore, the Sea Level Project is not likely to affect goshawk population viability.

Osprey

There are no known osprey nest locations on the Ketchikan Ranger District. Nest trees are usually broken-top spruce, either live or dead, and western hemlock snags. Osprey are usually found near water since their diet consists mainly of fish.

Osprey have been known to stop at some lakes on the District during migration. Small lakes in the Project Area provide an opportunity for migrating osprey to rest and feed. No nests have been recorded near the project.

The Sea Level Project is not expected to affect nesting osprey because no known nest site occurs in the Project Area, and availability of nesting and foraging areas in Southeast Alaska do not appear to be a factor limiting population growth. In addition, minimal or no effect on osprey habitat is expected from project activities, because uncut buffers will be maintained near streams, lakes, and coastal areas. If nests are discovered in the Project Area, standards and guidelines outlined in the Forest Plan will be followed. Based on this information, the project is not expected to adversely affect osprey.

Peale's Peregrine Falcon

The Peale's subspecies of the peregrine falcon (*Falco peregrinus pealei*) nests on the outer islands west of Prince of Wales Island. This species is not listed as endangered or threatened, but is covered by a provision of the "similarity of appearance" which broadens the scope of protection for all peregrine falcons. The nest distribution of this subspecies is closely associated with large seabird colonies, and seabirds are believed to be the major prey of the falcon.

Peregrine nest distribution is closely associated with large seabird colonies located on the outer coasts or nearby islands (USDA Forest Service 1991b). No seabird colonies or potential nesting cliffs exist near the Project Area. Based on this information, the project will not affect Peale's peregrine falcons or their habitat.

Goose-grass Sedge

This sedge is known to occur in the coastal mountains of Alaska and British Columbia and in the Rocky Mountains from Jasper, B.C., south to Glacier National Park, Montana. Its range in Alaska is limited to the alpine of coastal South-central and Southeast Alaska and the Aleutian Islands. Since this plant is expected to be near alpine, no effects are anticipated from this project.

Edible Thistle

This regionally endemic thistle is distributed primarily along coastal Oregon, Washington, and British Columbia and barely reaches southern most Southeast Alaska. It is known to exist in two locations in Misty Fiords National Monument (TLMP 1997). It is unknown whether

this species occurs in the Project Area. Its habitat is characterized as wet meadows and open woods along glacial streams.

Since the harvest activities generally avoid wet meadows and stream margins where this species would be expected to be found, no direct effects are anticipated from the Project even if the species were to occur in the Project Area.

Davy Mannagrass

This grass species is distributed from Southeast Alaska to central California. Its distribution in Alaska is limited to central and southern Southeast Alaska. It is known to occur in Southeast Alaska in only two documented locations: near Wrangell and on Prince of Wales Island; however, it is easily overlooked and likely to be more widespread in Southeast Alaska (USDA Forest Service 1994).

No known populations of davy mannagrass occur in the Project Area. Because it grows in shallow fresh water and along stream and lake margins (TLMP 1997), TLMP Standards and Guidelines should protect its habitat from disturbance. Therefore, no effects are anticipated from this project.

Wright Filmy Fern

This fern species occurs in coastal areas of Southeast Alaska and British Columbia. Three sightings have been documented in Alaska and are limited to Biorka and Mitkof Islands (USDA Forest Service 1994). It is unknown if the species occurs in the Project Area. This species appears to prefer humid shaded boulders, cliffs, tree trunks, and damp woods. In Alaska, it has been found in small populations on the base of trees and rock outcrops in damp woods.

No observations of this species have been documented for the Project Area. Undetected individuals could be affected. This project may affect individuals, but is not likely to adversely affect population viability.

Truncate Quillwort

This rooted aquatic species is known from a few widely isolated populations on Vancouver Island and South-central Alaska on the Copper River Delta (USDA Forest Service 1994). It is unknown whether this species occurs in the Project Area. Truncate quillwort grows immersed in shallow water of lakes and ponds (TLMP 1997).

Due to its rooted aquatic nature, this species does not occur in forested areas where harvest and roading activities would be concentrated. Even if the species does exist in the Project Area, stream and lakeshore buffers, as well as wetland protections, should provide adequate protection for this species. Therefore, no direct effects are anticipated from this project.

Calder Lovage

This plant species occurs in British Columbia and South-central and Southeast Alaska. Documented occurrences in Alaska are limited to two disparate areas at Kodiak Island and Dall Island (just west of Prince of Wales Island) in Pleistocene refugia on limestone substrate (USDA Forest Service 1994). It is unknown if this species occurs in the Project Area. Calder lovage occurs on rocky cliffs, open boggy or rocky slopes, and edges of coniferous forests. In Alaska it is known from alpine meadow habitats and edges of subalpine mixed conifer forest.

No observations of this species have been documented in the Project Area. Since calder lovage is not known to occur in the Project Area, and since its habitat is at a higher elevation than project activities, no effects are anticipated from this project.

Choris Bog Orchid

In Alaska, this bog orchid species is limited to the Aleutian Islands and southern coastal areas (USDA Forest Service 1994). Recent botanical surveys on Revilla Island have revealed a number of populations of this species. With the increasing number of observations, it is possible that this species is not as rare as previously thought.

Botanical surveys discovered populations of the plant in Units 2, 80, 126, and 134, and along road# 8341160. Units 2 and 80 avoid the populations found there. The populations in Unit

126 arc along the boundary. If the unit boundary is adjusted, there will be no effects on the population. Unit 126 is included in Alternatives 2 and 3.

This species is found in three locations within Unit 134. One population is in the center of the unit, making protection difficult if the unit is harvested. Given the high incidence of this species in portions of the unit that were surveyed, more pockets may occur in other parts of the unit. This unit is included in Alternatives 2 and 3.

Given the frequency of occurrence of this species in surveyed portions of the Project Area, more populations may occur in those areas not surveyed. Therefore, the project may affect chorus bog orchids. However, due to the number of known populations, the project is not likely to cause a trend towards listing, nor disrupt the general distribution of the species.

Bog Orchid

This species of bog orchid is limited to a small geographic range in southern most Southeast Alaska and adjacent British Columbia (USDA Forest Service 1994). Two documented sightings have been made in Alaska near Pearse Canal and on Dall Island. It is unknown if this species occurs in the Project Area. This plant occurs in wet open meadow habitat. No observations of this species were made during field reconnaissance. This species is not known to occur in forested areas. Therefore, there are no effects anticipated from harvest activities.

Loose-flowered Bluegrass

The distribution of this grass species is scattered between Southeast Alaska and Oregon. Seven sightings have been documented in Southeast Alaska near Hoonah, Sandborn Canal at Port Houghton, and Admiralty Island (USDA Forest Service 1994). It is not known if this species occurs in the Project Area. Loose-flowered bluegrass is associated with moist, open lowland woods and open-forest meadows. Undetected specimens could potentially be affected by harvest activities in open lowland woods and open-forest meadows. Therefore, this project may adversely affect loose-flowered bluegrass, but is not likely to cause a trend towards listing as threatened or endangered.

Straight-beak Buttercup

This species of buttercup is distributed from coastal southern Southeast Alaska to adjacent British Columbia and Vancouver Island (USDA Forest Service 1994). The closest documented occurrences to the Project Area include Loring and Yes Bay. It is unknown if the species occurs in the Project Area. It occurs in moist, open lowland meadows and other moist open habitats. Even if this species does occur in the Project Area, direct effects due to harvest activities are not anticipated to be significant as preferred open, moist habitats are generally avoided for timber harvest. Therefore, this project is not likely to adversely affect the straight-beak buttercup.

Queen Charlotte Butterweed

This species of butterweed is limited to the Queen Charlotte Islands of British Columbia and to disjunct populations in southeastern Alaska and northwestern Vancouver Island (USDA Forest Service 1994). Five occurrences have been documented in Alaska on Prince of Wales, Coronation, and Dall Islands. Queen Charlotte butterweed occurs in shady wet areas and bogs of montane to alpine habitats, to open rocky or boggy slopes, and in open rocky heath or grass communities. (USDA Forest Service 1994).

It is not known if this species occurs in the Project Area. No observations of this species were made during field reconnaissance and no sightings have been documented for the Project Area. Even if this species does occur in the Project Area, direct effects due to harvest activities are not anticipated to be significant as preferred open, moist habitats are generally avoided for timber harvest. Therefore, this project is not likely to adversely affect the Queen Charlotte butterweed.

Other Species of Concern Assessments

Alexander Archipelago Wolf

The Alexander Archipelago wolf is a small subspecies of the gray wolf (Goldman 1937, Pedersen 1982), similar in appearance to the Vancouver Island wolf (*C. l. crassodon*). Kirchhoff (1992) described the Alexander Archipelago wolf as occurring on the Southeast Alaska mainland and all large islands in Southeast Alaska except for Admiralty, Baranof, and Chichagof.

On December 17, 1993, the USFWS received a petition from the Biodiversity Legal Foundation to list the Alexander Archipelago wolf of Southeast Alaska as threatened pursuant to the Endangered Species Act. On May 13, 1994, the USFWS found that the petitioners had presented substantial information indicating that listing may be warranted and a status review of the species was initiated. On February 16, 1995, the USFWS determined that listing was not warranted. Since that time the courts directed the USFWS to reconsider their determination. The USFWS recently determined that the wolf did not warrant listing.

The primary food of most Southeast Alaska wolves is deer (Wood 1990, Person et al. 1996). Beaver, mountain goat and moose are also primary prey in some mainland areas and spawning salmon are fed on when available (Wood 1990). Alexander Archipelago wolf abundance is likely linked to deer abundance and availability, particularly in southern island habitats (Suring et al. 1988, Wood 1990, Person et al. 1996).

Based on field observations, discussions with trappers, and anecdotal information, the wolf population in Southeast Alaska was estimated to be 635 to 690 individuals, distributed in 85 packs (Morgan 1990). However, Person et al. (1996) estimates that the current Southeast population at about 908 individuals with about 20 percent of them occurring in Game Management Unit (GMU) 1A (Revilla Island and surrounding mainland). The Sea Level Project contains portions of Wildlife Analysis Areas (WAA) 405 and 406, which are included in GMU1A.

Many studies have shown that wolf abundance may be inversely correlated with road density (Theil 1985, Jensen et al. 1986, Mech et al. 1988, Fuller 1989, Person et al. 1996). Person et al. (1996) noted that wolf harvest rates increased sharply in Wildlife Analysis Areas on Prince of Wales Island where road density exceeded 0.49 miles per square mile. The TLMP (1997) Standards and Guidelines recommend maintaining open road densities below 0.7 to 1.0 miles per square mile to help protect wolf populations from over harvest. This recommendation is based on the work in Person et al. (1996). The primary threat of high road densities is the increased access to humans who kill wolves by shooting, snaring or trapping (Van Ballenberghe et al. 1975, Mech 1977).

Effects of Proposed Action on Population or Habitat

Habitat Capability Model

Implementation of the Sea Level Alternative 2 (maximum timber harvest) will result in a reduction in deer habitat capability. Wolf habitat capability is predicted to be reduced in proportion to the reduction in deer habitat capability. The wolf model is based on the deer and goat models since moose are not present within the WAAs. Wolf habitat capability will be reduced from existing conditions by the percentages shown in the table below.

Table Assessment and Evaluation-4
Percent Decrease in Habitat Capability for Wolf from Current Conditions

WAA	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6
405	0.0	2.7	1.6	0.9	0.3	0.0
406	0.0	1.4	0.7	0.6	0.5	0.0

Source: Burns 1998.

Past activities may have affected wolves in WAAs 405 and 406. Based on application of the Tongass Habitat Capability Model for the gray wolf, habitat capability declined about 9.7 percent in WAA 405 and 14.8 percent in WAA 406 between pre-logging and existing conditions. When the Sea Level Project is combined with these past harvest activities, habitat capability reduction from pre-harvest conditions (1954) are as shown in the table below.

Table Assessment and Evaluation-5
Percent Decrease in Habitat Capability for Wolf from 1954 Conditions

WAA	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6
405	9.7	12.1	11.1	10.5	9.9	9.7
406	14.8	16.4	15.8	15.7	15.7	15.2

Source: Burns 1998.

Deer Winter Habitat

This section discusses the relationship between deer habitat, deer population levels, and wolf population levels. Deer are the primary prey species for wolves in WAAs 405 and 406.

Habitat most valuable to deer during the winter period is characterized by low elevation mature forest on south facing slopes. We conducted an analysis on the amount of low elevation (<800 feet) productive old-growth forest (>8,000 MBF/acre) on south facing slopes (135 degrees to 225 degrees). There are approximately 6,858 acres meeting these criteria within the Sea Level Project Area. This is about 83 percent of that which existed prior to extensive logging. Alternative 2 would decrease this valuable deer habitat to about 71 percent of historical (prior to 1954) conditions. Alternatives 3, 4, 5 and 6 would reduce this habitat to about 77, 78, 79 and 82 percent of historical levels, respectively.

WAA 405 contains about 4,081 acres of mature forest below 800 feet elevation on south facing slopes. This is about 93 percent of historical levels. Alternative 2 would decrease this valuable deer habitat to about 83 percent of historical (prior to 1954) conditions. Alternatives 3, 4, 5 and 6 would reduce this habitat to about 88, 90, 91 and 93 percent of historical levels, respectively.

WAA 406 contains about 6,657 acres that meet these criteria, which is about 83 percent of historical conditions. Alternative 2 would decrease this valuable deer habitat to about 77 percent of historical (prior to 1954) conditions. Alternatives 3, 4, 5 and 6 would reduce this habitat to about 80, 80, 81 and 83 percent of historical levels, respectively.

The stability of deer and wolf populations depends on several factors, including predation by wolves, hunters, and other predators. Some of the most important determinants are growth rate and stochastic events such as severe winters. Severe winters or reductions in quality deer habitat can result in widely fluctuating wolf and deer populations. If alternate prey is not available or if the reproductive potential of the deer population is reduced because of habitat loss, then recovery from a population crash could take a long time (Person et al. 1996).

Person et al. (1996) estimates approximately 18 deer per square mile are needed to sustain wolf populations (for a high probability of maintaining viable populations). Falling below this level, decreases the probability of maintaining viable populations.

Applying this density to the Sea Level Project Area, about 2,574 deer would be needed to support wolf populations in the Sea Level Project Area. Deer habitat capability is currently about 2,411 deer (17 deer per square mile). This is below what Person et al. (1996) recommends. Alternatives 2 and 3 reduce the deer density to 16 deer per square mile in the Project Area.

Habitat capability for WAA 405 is currently about 1,850 deer (25 deer per square mile), well above that recommended by Person et al. (1996). Deer density is estimated to remain at 25 deer per square mile for all project alternatives. This is a decrease from an estimated 28 deer per square mile in 1954. WAA 405 should retain a high probability of maintaining viable wolf populations.

Habitat capability for WAA 406 is currently about 2,691 deer (13 deer per square mile), well below that recommended by Person et al. (1996). Deer density will remain at about 13 deer per square mile for all alternatives. This is a decrease from about 16 deer per square mile in 1954 (TLMP 1997). This WAA never had high levels of deer habitat capability and is estimated being below 18 deer per square mile prior to major timber harvesting.

WAA 406 shows a lower probability of maintaining viable wolf populations. All of the alternatives, including the no action alternative, show the same estimate for deer density (13 deer per square mile). The resulting 13 deer per square mile includes those acres in old-growth habitat reserves. Therefore, the areas between the reserves probably support somewhat less than 13 deer per square mile. This suggests that WAA 406 may serve as a drain to neighboring deer and wolf producing areas. This also suggests an increased importance of connectivity.

WAA 406 is adjacent to the 2.3 million acre Misty Fjords National Monument. This undeveloped area, along with areas like WAA 405, should serve as a supply source for WAA 406 as long as connectivity corridors are maintained consistent with TLMP (1997). Alternatives 2 and 3 harvest timber in identified connecting corridors. Alternatives 4, 5, and 6 maintain connectivity.

Roads

Road construction associated with logging activities has increased road densities. Approximately 48 miles of road exist in WAA 405 within 71.69 square miles of land (GIS

database 1997). Total road density in WAA 405 under existing conditions is approximately 0.67 miles per square mile. Three miles of the road have been blocked with physical barriers (tank traps or grown over with trees). The result is about 45 miles of open, usable road in WAA 405. The resulting open road density is 0.63 miles per square mile.

None of the roads are connected to the Ketchikan Road System. The road system in WAA 405 receives very little use by trappers and hunters. Additional roads would be scheduled for closure under the action alternatives. Most new roads would be closed following project completion.

Approximately 110 miles of road exist in WAA 406 within 199.23 square miles of land (GIS database 1997). Total road density in WAA 406 under existing conditions is approximately 0.55 miles per square mile. Approximately 13 miles of the road have been blocked with physical barriers (tank traps or grown over with trees). The result is about 97 miles of open, usable road in WAA 406. The resulting open road density is 0.49 miles per square mile.

Table Assessment and Evaluation-6
Open Road Density for WAAs 405 and 406, by Alternative

WAA	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6
405	0.49	0.57	0.54	0.53	0.49	0.49
406	0.31	0.31	0.31	0.31	0.31	0.31

Source: Burns 1998.

The table above shows the resulting open road densities for WAAs 405 and 406 for each alternative. All alternatives in the Sea Level Project maintain road densities below 0.7 miles per square mile as suggested by the TLMP (1997). Closures would consist of physical barriers (tank traps, boulders, etc.) or gated access for administrative purposes, depending on expected future use of the road. The figures in Table Assessment and Evaluation-6 reflect these proposed closures. However, these closures may still allow off-road vehicles to use the road if they can get past the barrier.

A road connection between Ketchikan and Shelter Cove (WAA 406) is being considered as a separate project. This would allow easy access to the Shelter Cove area by Ketchikan residents. The increased access could increase deer harvest rates, which could indirectly affect wolf populations by reducing their prey base. The road connection could directly affect wolves through increased hunting and trapping of wolves. We are unable to quantify the effects this would have on wolf populations. Cumulative effects could be substantial. To mitigate some of the effects, all existing roads except the mainline roads in the Shelter Cove area would be blocked following project completion. All newly constructed roads would also be blocked. These barriers may be less than fully effective since off-road vehicles may be able to pass some of the road blocks.

Summary

Because of the small reduction in deer and wolf habitat capability, the small amount of high value deer habitat harvested, and the blocking of new roads, direct effects from the Sea Level Project are not expected to be significant. The TLMP viable population strategy will be maintained through implementation of all alternatives. This strategy will maintain viable populations of wolves throughout the Project Area.

Most effects on wolves in WAAs 405 and 406 are from past activities. Cumulative effects reduce habitat capability, and the amount of high value deer habitat. This suggests that cumulative impacts of past activities and the Sea Level Timber Sale(s) may affect wolves. However, the Sea Level Project will follow the TLMP strategy for maintaining viable wildlife populations. Old-growth reserves and roadless areas in adjacent Misty Fiords National Monument will serve to maintain wolf population viability. Furthermore, 5 miles of road potentially connected to the Ketchikan road system will be closed. Open road density will be below 0.7 miles per square mile as recommended by the TLMP (1997). With these strategies and conditions, the Sea Level Project is not expected to threaten wolf population viability and stability.

Keen's Myotis (Keen's long-eared bat)

Records suggest that the range of Keen's myotis is restricted to Pacific coastal forests from western Washington to southeastern Alaska (Nagorsen and Brigham 1993 and van Zyll de Jong and Nagorsen 1994 as cited by Parker 1996). Three specimens have been collected at Wrangell, northern Prince of Wales Island, and Hoonah (Parker 1996). Parker (1996) suggests these bats are year-round residents. Keen's myotis apparently roosts in snags, hollow trees, rock crevices and caves (van Zyll de Jong 1985 and cited in Parker 1996).

Harvest units could remove potential habitat in the form of snags and hollow trees. The amount of habitat removed is not expected to be sufficient to cause a threat to population viability. Therefore, this project may affect individuals, but is not likely to affect population viability.

Marbled Murrelet

Marbled murrelets nest on land or in trees. They usually nest in mature trees which range in diameter at breast height from 35 to 210 inches. Nests are normally located high above the ground with good overhead protection (USFWS 1992). Murrelets often nest in thick moss on branches of old growth coniferous trees in Southeast Alaska (Armstrong 1990).

Ralph et al. (1995) estimated the marbled murrelet population in Southeast Alaska at 96,200. However, a much more thorough study (Agler et al. 1995) determined the early-summer, on-water population (plus or minus 95 percent CI) in Southeast Alaska to be 434,129 (plus or minus 166,525).

Murrelets have been observed in the saltwater in Thorne Arm and Carroll Inlet. Survey methods were such that many undiscovered nests probably exist on land in the Area. It is unknown how many occur in the Project Area. No nests have been found in the Project Area. Since all inland forests are less than 25 miles from salt water, all could be potential marbled murrelet nesting habitat.

All action alternatives will harvest between 1 and 5 percent of the old-growth forest stands which may be capable of providing nesting habitat for marbled murrelets. This may affect individuals if their nests occur in the proposed units. However, murrelets are expected to remain abundant in the vicinity of the Sea Level Project Area.

Based on current information, a reduction in available nesting habitat may occur; therefore, marbled murrelets may be affected. However, because of the many large unroaded blocks of habitat that exist in and adjacent to the Project Area (Misty Fiords National Monument=2,136,000 acres; Cleveland Peninsula=250,000+ acres; Orchard Lake=10,000 acres; and the Naha River area=20,000 acres), the regional population of marbled murrelets is anticipated to remain large. Any nests located during field reconnaissance or unit layout will be protected from timber harvest and blowdown using the management guidelines. The TLMP (1997) uses a 600-foot buffer around each nest. Disturbance activities would be minimized during the nesting season and the buffer zone would be maintained and monitored for at least two nesting seasons following discovery. If the nest remains inactive for more than 2 years, the buffer protection may be removed.

In areas with timber harvesting, the amount of nesting habitat for marbled murrelets will be reduced. Murrelets would not likely re-occupy a clearcut area until the regenerating forest attained a suitable degree of complexity and individual trees attained a suitable size, perhaps no sooner than 150 years (DeGrange 1996). It is not known what the actual effects of timber harvest will be, other than the total amount of habitat will be reduced. Fragmentation or increased edge effects may also reduce habitat capability for marbled murrelets.

Even if the breeding population were reduced in proportion to the percentage of productive old-growth forest harvested under the action alternatives (1 to 5 percent), the population in the Sea Level Assessment (Project) Area would still be strong. Therefore, the effect on the huge Southeast Alaska population (434,000 plus or minus 166,000) would be negligible. Therefore, the Sea Level Project may effect individual marbled murrelets, but will have no effect on population viability.

Harlequin Duck

Harlequin ducks nest along inland rivers and streams. The nest is usually 6 feet (but up to 60 feet) from water (DeGraff et al. 1991). No nesting harlequin ducks have been recorded in the Project Area, although the potential does exist. No harlequin duck surveys were done and no incidental observations were made in the Project Area. Harvest units are located away from riparian habitat. A small chance exists that the Sea Level Timber Sale(s) could effect a few individual harlequin ducks; still, it will not cause a trend towards listing. Therefore, the project may effect individuals, but will not adversely affect population viability.

Olive-sided Flycatcher

Olive-sided flycatchers are neotropical migratory birds that winter south of the United States (Suring and Pardew 1993). Armstrong (1990) lists them as uncommon in Southeast Alaska in spring, summer, and fall (nesting season). Olive-sided flycatchers occur in coniferous forests and forest edges and they nest in conifers (Armstrong 1990).

Field crews reported two olive-sided flycatcher observations. Both were singing males and both were detected at the edge of an old clearcut. One was at the edge of an old clearcut east of Unit 70. The other was at the north end of an old clearcut near Unit 90. Survey methods were limited to incidental observations.

Olive-sided flycatchers may occur in the Project Area along some of the forest edges in the spring, summer, and fall. Olive-sided flycatchers use forest edges and are not considered an old-growth dependant species. Habitat alteration will be insignificant and will not cause a loss of population viability. Based on this information, it is determined that this project will not affect olive-sided flycatchers or their habitat.

Spotted Frog

The spotted frog occurs in or near fresh water and is believed to range, in Southeast Alaska, south from the Taku River in Juneau, other transboundary rivers, and on some islands of Southeast Alaska and British Columbia. The presence of spotted frogs on Revilla Island has not been confirmed. The Project Area contains some small muskeg ponds and lakes that could provide habitat for spotted frogs.

Amphibian surveys have been completed within the Project Area (Sec Amphibian Survey section). No spotted frogs were found during the surveys.

Riparian habitats along all lakes, rivers, and streams on the Forest will be managed according to the Riparian and Lake Standards and Guidelines in the TLMP (1997). Harvest units are located away from potential habitat. Based on this information, it is determined that this project is not likely to affect spotted frogs or their habitat.

Ascending Moonwort Fern

This plant species occurs widely scattered in grassy fields from 0 to 2,500 meters elevation in British Columbia, Ontario, Yukon, Alaska, California, Montana, Nevada, Oregon, and Wyoming (Wagner 1993). It is unknown if this species occurs in the Project Area. Potential

**Super Round Wedge
Moonwort Fern**

habitat occurs in the Area. Undetected specimens could potentially be affected by harvest activities, but effects are not likely to cause a trend towards listing the species.

We have insufficient information on the distribution, taxonomy, and habitat requirements of this species to adequately evaluate effects from this project. It is unknown whether this species or potential habitat occurs within the Project Area.

Willow

This subspecies of willow (*Salix reticulata ssp. glabelllicarpa*) occurs as a prostrate shrub on alpine cliffs and ledges above 2,400 feet elevation. The subspecies is limited to the Queen Charlotte Islands (Argus 1965) and one documented occurrence on an alpine peak near Juneau, Alaska. It is unlikely this species will be affected by harvest activities since activities will not occur near alpine. Based on this information, no effects are anticipated on this willow subspecies from this project.

Literature Cited

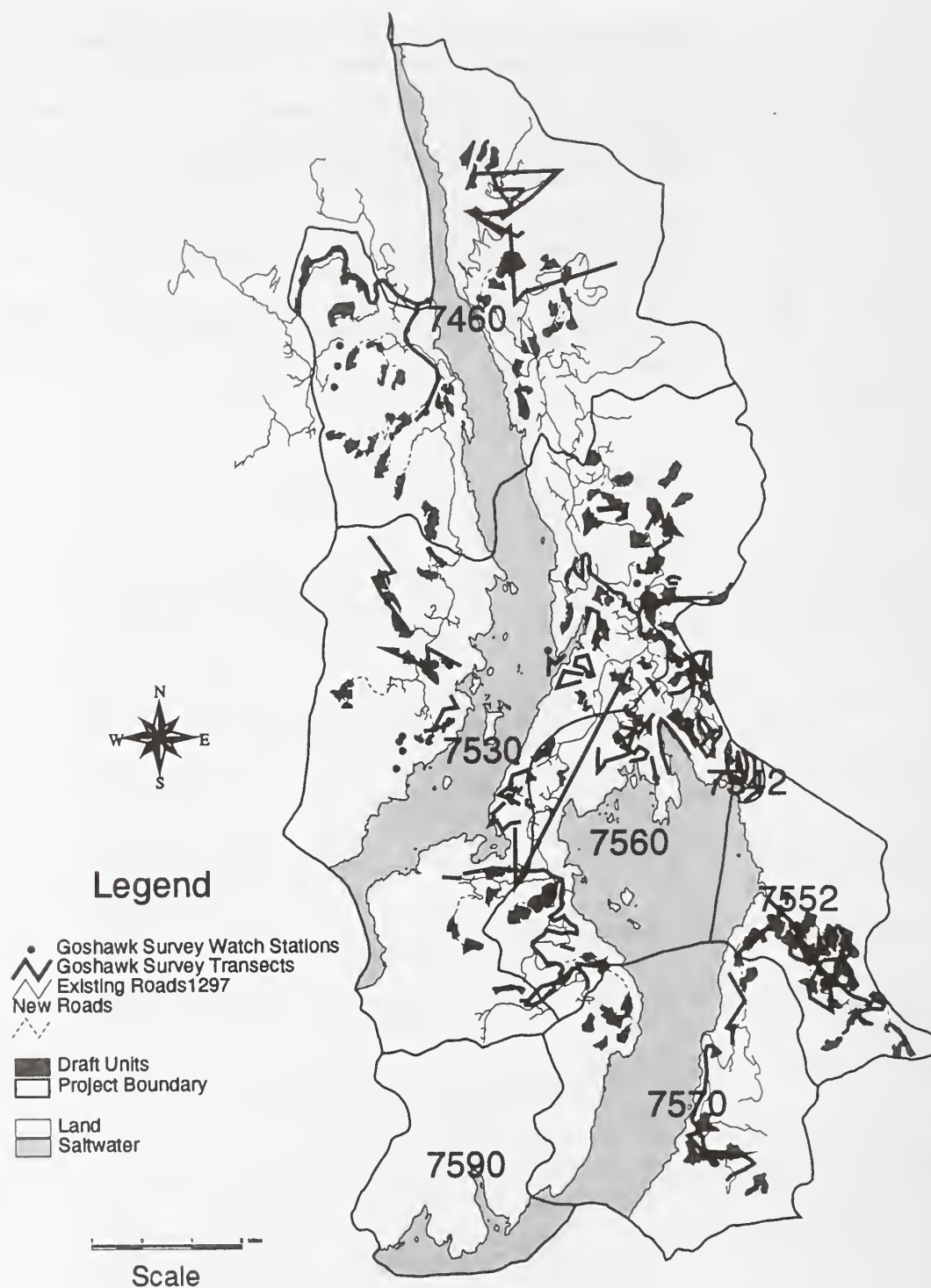
- ADF&G. 1993. Goshawk Ecology and Habitat Relationships on the Tongass National Forest-1993 Field Season Progress Report. USDA Forest Service Contract No. 43-0109-3-0272. Alaska Dept. of Fish and Game, Division of Wildlife Conservation. 12pp.
- ADF&G. 1994. Goshawk Ecology and Habitat Relationships on the Tongass National Forest-1994 Field Season Progress Report. USDA Forest Service Contract No. 43-0109-4-0209. Alaska Dept. of Fish and Game, Division of Wildlife Conservation. 24pp.
- Agler, B.A., S.J. Kendall, P.E. Seiser, and J.R. Lindell. 1995. Estimates of Marine Bird and Sea Otter Abundance in Southeast Alaska During Summer 1994. USFWS, Anchorage and Juneau, Alaska. 49pp plus 41 figures and 4 Appendices.
- Ambrose, R.E., R.J. Richie, C.M. White, P.F. Schempf, T. Swem, R. Kittrick. 1988. Changes in the Status of Peregrine Falcon Populations in Alaska. Chapter 11 in Peregrine Falcon Populations - Their Management and Recovery, edited by T.J. Cade, J.H. Enderson, C.G. Thelander, and C.M. White. The Peregrine Fund, Inc., Boise, Idaho.
- American Ornithologists Union (AOU). 1957. Checklist of North American Birds. Fifth Edition.
- Anderson, C.M. and P.M. DeBruyn. 1979. Behavior and Ecology of Peregrine Falcons Wintering Upon the Skagit Flats, Washington. Washington Dept. of Game. PF-79-1. 53pp.
- Anderson, C.M., P.M. DeBruyn, T. Ulm, and B. Gossoin. 1980. Behavior and Ecology of Peregrine Falcons Wintering Upon the Skagit Flats, Washington: A Report on the 1980 Field Season. Wash. Dept. of Game. 54pp.
- Argus, G. W. 1965. An Endemic Subspecies of *Salix Reticulata* L. From the Queen Charlotte Islands, British Columbia. Canadian Journal of Botany. Vol. 43, 1021 - 1024.
- Armstrong, R. H. 1990. Guide to the Birds of Alaska. Alaska Northwest Books, Anchorage/Seattle. Third Edition. 342pp.
- Baker, C. S., L. M. Herman, B. G. Gays, and W. F. Stipel. 1982. The Impact of Vessel Traffic on the Behavior of Humpback Whales in Southeast Alaska. Kewalo Basin Marine Mammal Laboratory. Univ. of Hawaii, Honolulu, Hawaii.
- Baker, C. S. and Louis Herman. 1983. The Impact of Vessel Traffic on the Behavior of Humpback Whales in Southeast Alaska. Kewalo Basin Marine Mammal Laboratory. Univ. of Hawaii, Honolulu, Hawaii.

- Baker, C. S., L. M. Herman, A. Perry, W. S. Lawton, J. M. Strategy. 1985. Population Characteristics and Migration of Summer and Late-Season Humpback Whales (*Megaptera novaeangliae*) in Southeastern Alaska. *Mr. Mamm. Sci.* 1(4):304-323.
- Bellrose, F. C. 1980. Ducks, Geese, and Swans of North America. Wildlife Management Institute. Stackpole Books, Harrisburg, PA. 549pp.
- Crocker-Bedford, C. 1990a. Status of the Queen Charlotte Goshawk. Planning Records, TLMP (1997).
- Crocker-Bedford, C. 1990b. Goshawk reproduction and forest management, *Wildl. Soc. Bull.* 18:262-269.
- Crocker-Bedford, C. 1991. Goshawk Reproduction at Different Levels of Timber Harvest. *Annu. Meeting Soc. Conserv. Biol. Abstracts* 5:208.
- Crocker-Bedford, C. 1992. A Conservation Strategy for the Queen Charlotte Goshawk in the Tongass National Forest. Unpublished, March 1992 draft. Ketchikan Area, Tongass National Forest.
- Crocker-Bedford, C. 1994. Conservation of the Queen Charlotte Goshawk in Southeast Alaska. Unpublished Rep., May 1994. Revision of Crocker-Bedford (1992). Ketchikan Area, Tongass National Forest.
- Crocker-Bedford, D.C. 1995. Northern Goshawk Reproduction Relative to Selection Harvest in Arizona. *J. Raptor Research*, 29:42-43.
- Crocker-Bedford, C., and D. Chaney. 1988. Characteristics of Goshawk Nesting Stands. Pages 210-217 in R. L. Glinski et al., eds. *Proc. Southwest Raptor Management Symposium and Workshop*. National Wildlife Federation, Washington, D.C.
- DeGraff, R. M., V. Scott, R.H. Hamre, L. Ernst, and S.H. Anderson. 1991. Forest and Rangeland Birds of the United States. USDA Forest Service - Ag. Handbook #688. 625pp.
- DeGrange, Anthony R.. 1996. A Conservation Assessment for the Marbled Murrelet in Southeast Alaska. USDA Forest Service - General Technical Report #PNW-GTR-388. 72pp.
- Fuller, T.K. 1989. Population Dynamics of Wolves in North-Central Minnesota. *Wildl. Monogr.* 105. 41pp.
- Hayward, G., C. Iverson, C. Crocker-Bedford, G. Degayner, K. Titus, J. Lindell and P. Schempf. 1995. Conservation Assessment for Northern Goshawks in Southeast Alaska. Review Draft for TLMP. July 1995. 115pp.
- Iverson, G. C., G. Hayward, K. Titus, G. DeGayner, T. E. Lowell, D. C. Crocker-Bedford, P. Schempf, and J. Lindell. 1996. Conservation Assessment for Northern Goshawks in Southeast Alaska. USDA Forest Service, Pacific Northwest Research Station, Portland. Gen. Tech. Rep. PNW-GTR-387. 101pp.
- Jensen, W.F., T.K. Fuller, and W.L. Robinson. 1986. Wolf, *Canis Lupus*, Distribution on the Ontario-Michigan Border Near Sault Ste. Marie. *Can. Field-Naturalist* 100:363-366.
- Kennedy, P. L. 1989. The Nesting Ecology of Cooper's Hawks and Northern Goshawks in the Jamez Mountains, NM---a Summary of Results, 1984-1988. U.S. Dept. Agric., Forest Service., Final Rep. Contract P.O. # 43-8379-8-346. 21pp.
- Kenward, R. E. 1982. Goshawk Hunting Behavior, and Range Size as a Function of Food Habitat Availability. *J. Animal Ecology* 51:69-80.

- Kirchoff, M.D. 1992. The Alexander Archipelago Wolf. Pp. 166-186. In: Suring, L.H. et al. A Strategy for Maintaining Well-distributed, Viable Populations of Wildlife Associated with Old-growth Forests in Southeast Alaska. Report of an Interagency Committee. Review Draft, Juneau, Alaska. April 1992. 307pp.
- Marshall, D. B. 1992. Status of the Northern Goshawk in Oregon and Washington. Audubon Society, Portland. 35pp.
- McGowan, J. D. 1975. Distribution, Density, and Productivity of Goshawks in Interior Alaska. U. S. Dept. Inter., Fed. Aid Wildl. Rest. Proj. Rep. W-17-3, W-17-4, W-17-5, W-17-6, Job 10.6R. Final Report. 65pp.
- Mech, L.D. 1977. Productivity, Mortality, and Population Trends of Wolves in Northeastern Minnesota. J. Mamm. 58(4):559-574.
- Mech, L.D., S.H. Fritts, G.L. Radde, E.J. Paul. 1988. Wolf Distribution and Road Densities in Minnesota. Wildl. Soc. Bull. 16:85-87.
- Nemoto, T. 1970. Feeding Patterns of Baleen Whales in the Ocean. pp. 241-381 in J. H. Steele (ed), Marine Food Chains. Oliver and Boyd, Edinburgh.
- Norris, Kenneth S. and Randall R. Reeves (ed). 1978. Report on a Workshop On Problems Related to Humpback Whales (*Megaptera novaeangliae*) in Hawaii, U. S. Marine Mammal Commission. Washington, D. C. Report No. MMC-77/03 (available from National Technical Information Service PB-280794).
- Pachard, J.P., and L.D. Mech. 1980. Population Regulation in Wolves. Pages 135-150 in M.N. Cohen, R.S. Malpass, H.G. Klein (eds.), Biosocial Mechanisms of Population Regulation. Yale Univ. Press, New Haven, Conn.
- Parker, D. I. 1996. Forest Ecology and Distribution of Bats in Alaska. Thesis. University of Alaska-Fairbanks.
- Patla, S. 1991. Northern Goshawk Monitoring Report #2, 1990. USDA Forest Service, Targhee National Forest, Final Report P.O. # 43-02s2-0-0184. St. Anthony, Idaho. 42pp.
- Paton, P. W. C., C. J. Ralph, H. R. Carter, and S. K. Nelson. 1990. Surveying Marbled Murrelets at Inland Forested Sites: A Guide. USDA, Forest Service, Pacific Southwest Research Station, Berkeley, CA. Gen. Tech. Rep. PSW-120. 9 pp.
- Pease, B. 1973. Effects of Log Rafting and Dumping on the Marine Environment of Southeast Alaska. Thesis, Univ. of Washington.
- Peltier, W. and C. Weber, eds. 1985. Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms. EPA 600/4-85-113. US Environmental Protection Agency, Cincinnati, OH.
- Person, D. K., M. Kirchhoff, V. Van Ballenberge, G. C. Iverson, and E. Grossman. 1996. The Alexander Archipelago Wolf: A Conservation Assessment. USDA Forest Service, Pacific Northwest Research Station. Gen. Tech. Rep. PNW-GTR-384. 42 pp.
- Ralph, C.J., G.L. Hunt Jr., M.G. Raphael, and J.F. Piatt. 1995. Ecology and Conservation of the Marbled Murrelet in North America: an Overview. In: Ecology and Conservation of the Marbled Murrelet (C.J. Ralph et al. eds.) Pacific Southwest Research Station, USDA Forest Service. Gen. Tech. Report PSW-GTR-152. pgs 3-23.
- Reynolds, R. T. 1983. Management of Western Coniferous Forest Habitat for Nesting Accipiter Hawks. USDA Forest Service, GTR RM-102. 7pp.

- Reynolds, R.T. 1989. Accipiters. Pages 92-101 in B.G. Pendleton et al., ed., Proc. Western Raptor Management Symposium and Workshop. Natl. Wildl. Fed., Washington, D.C.
- Reynolds, R. T., Graham, M. H. Reiser, R. L. Bassett, P. L. Kennedy, D. A. Boyce, Jr., G. Goodwin, R. Smith, and E. L. Fisher. 1991. Management Recommendations for the Northern Goshawk in the Southwestern United States. USDA Forest Service, Southwest Region, Albuquerque, N.M. 184pp.
- Smith, C.A., R.E. Wood, L. Beir, K. Bovee. 1987. Wolf-deer Habitat Relationships in Southeast Alaska. Fed. Aid. In Wildl. Rest. Rep. W-22-4, W-22-5, and W-22-6.
- Suring, L.H., E.J. DeGayner, R.W. Flynn, M.L. Orme, L.C. Shea, R.E. Wood. 1988. Habitat Capability Model for Gray Wolves in Southeast Alaska. Review draft. 16pp.
- Suring, L.H., and N. Pardew. 1993. List of Neotropical Migrant Birds on National Forests in Alaska. Habitat Hotline. Issue no. 93-1. US Forest Service, Alaska Region, Juneau.
- Taverner, P. A. 1940. Variation in the American Goshawk. Condor 42:157-160.
- Theil, R.P. 1985. Relationships Between Road Densities and Wolf Habitat Suitability in Wisconsin. Amer. Midl. Naturalist 113(2):404-407.
- Titus, K., C.J. Flatten, and R.E. Lowell. 1994. Northern Goshawk Ecology Habitat Relationships on the Tongass National Forest (goshawk nest sites, food habits, morphology, home range and habitat data)-Final Annual Project Report. USDA Forest Service Contract No. 43-0109-0272. Alaska Department of Fish and Game, Division of Wildlife Conservation. 69pp. plus Appendices.
- USDA Forest Service. 1990. Old-growth Habitats and Associated Wildlife Species in the Northern Rocky Mountains. Publ. R1-90-42, Northern Region, Missoula, MT.
- USDA Forest Service. 1991a. Management Guidelines for the Northern Goshawk in the Southwest Region, Federal Register 56(199):51672-51680.
- USDA Forest Service. 1991b. Tongass Land Management Plan, Supplement to the Draft Environmental Impact Statement, Proposed Revised Forest Plan. R10-MB-146. Alaska Region, Juneau.
- USDA Forest Service. 1994. A Working Guide to the Sensitive Plants of the Alaska Region. USDA Forest Service, Alaska Region, Juneau, Alaska.
- USDA Forest Service. 1997. Tongass Land Management Plan, Final Environmental Impact Statement. Forest Service, R10-MB-338b.
- USDA Forest Service, Alaska Region. 1992. Recommended Management Guidelines for the Northern Goshawk Management Area. Unpublished. Juneau, Alaska.
- USDA Forest Service Alaska Region. 1994. Interim Habitat Management Guidelines for Maintaining Well-distributed Viable Wildlife Populations within the Tongass National Forest. Draft Environmental Assessment. USDA Forest Service, Alaska Region, Juneau, Alaska.
- U.S. Fish and Wildlife Service. 1992. Endangered and Threatened Wildlife and Plant Species: Determination of Threatened Status for Wash., Orc., and Calif. Populations of Marbled Murrelet. Federal Register 57 (191): 54328-45337.
- Van Ballenberge, V., A.W. Erickson, and D. Byman. 1975. Ecology of the Timber Wolf in Northeastern Minnesota. Wildl. Monogr. 43 pp.

- Wagner, W. H. 1993. *Flora of North America*, Volume 2. *Flora of North America* Editorial Committee. Oxford University Press.
- Webster, J. D. 1988. Some Bird Specimens from Sitka, Alaska. *Murrelet* 69:46-48.
- West, E. W. 1993. Rare Vertebrate Species of the Chugach and Tongass National Forests, Alaska. Alaska Natural Heritage Program. The Nature Conservancy, Anchorage. 254pp.
- Wing, Bruce L. and Kenneth Krieger. 1983. Humpback Whale Prey Studies in Southeastern Alaska, Summer 1982. Northwest and Alaska Fisheries Center, Auke Bay Laboratory. National Marine Fisheries Service, NOAA. Auke Bay, Alaska.
- Woodbridge, B., and P.J. Detrich. 1994. Territory Occupancy and Habitat Patch Size of Northern Goshawks in the Southern Cascades of California. *Studies in Avian Biology* 16: 83-87.



Map 1. Goshawk Surveys

KB 1/98

Appendix D

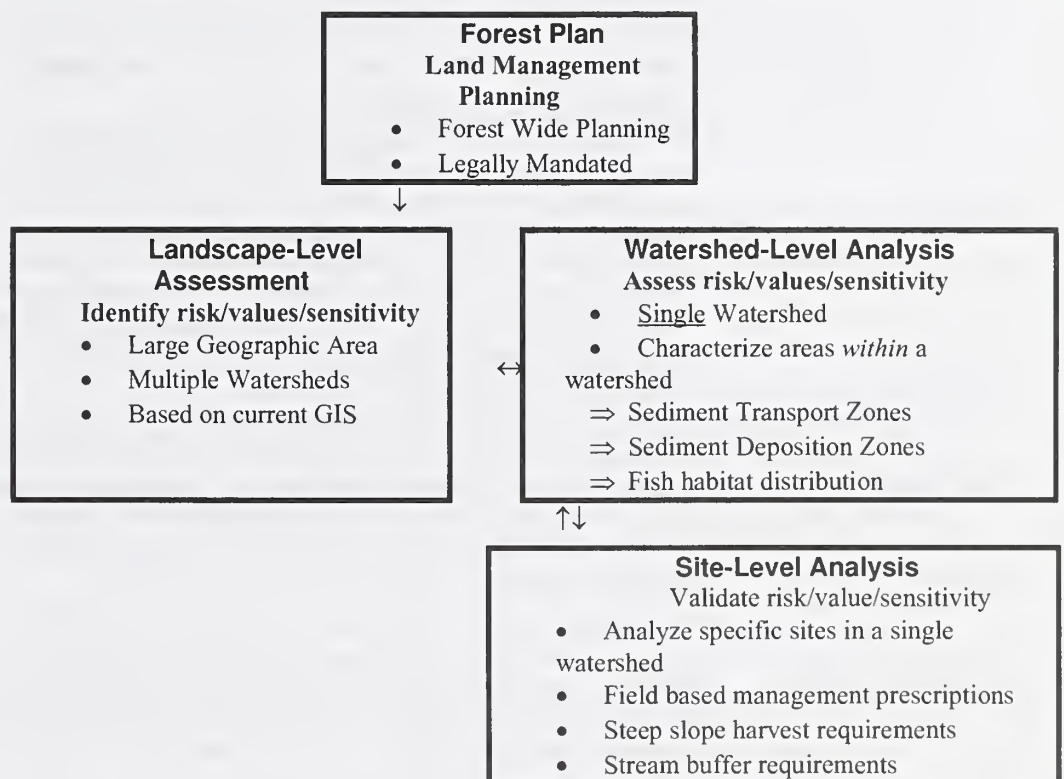
Watershed Report

Watershed Report

Introduction

Watershed analysis is a procedure for assessing important riparian and aquatic habitat values and geomorphic processes within a watershed (TLMP Forest Plan, Appendix J). It is to be considered within the overall context of ecosystem analysis. Watershed Analysis describes key aquatic and riparian resources, along with their habitat conditions and trends. The Tongass watershed analysis is a hierarchical process designed to be compatible with current regional planning processes. Land management planning in the Alaska Region occurs at two levels: forest-wide and project-level. Within this context, watershed analysis may occur at four spatial scales: forest-level, landscape-level, watershed-level, and site-level, as shown in Figure Watershed-1.

Figure Watershed-1
Spatial Scales for Watershed Analysis in the Alaska Region



Source: USDA Forest Service 1997c.

Watershed Analysis requires the use of both field work and computer models. Analytical tools and field analysis will be used to determine levels of sensitivity for key areas within each watershed. They will also be used to identify areas that are important for maintaining the integrity and function of riparian areas and stream channels as related to fish habitat. This report will also provide a strategy and site-specific recommendations to provide for long-term stability of riparian, channel, and fish habitat conditions.

The Watershed Analysis Handbook for the Alaska Region provides the framework for this watershed analysis. The handbook states that it is, "... intended to be a dynamic document that will evolve with the application of these procedures in the near future and be updated periodically as new information and techniques are developed, reviewed and accepted." The handbook outlines eight core topics to address in a watershed analysis. The eight core topics are:

- Mass Slope/Erosion (potential for landslides)
- Hydrology
- Vegetation
- Stream channel
- Water Quality
- Human Uses
- Species and Habitat
- Natural Disturbance

The eight core topics are addressed individually in the Affected Environment and Cumulative Effects section located in Chapter 3 Aquatic Resources of the Sea Level Draft EIS. This Watershed Report characterizes each watershed based on the eight core topics.

Sediment Risk Assessment Models

The Landscape Level Sediment Risk Assessment Models used in this analysis incorporate most of the core topics identified by the watershed handbook. This is the first level of analysis using the attributes that are stored electronically in GIS. The landscape-level assessment evaluates multiple, hydrologically independent watersheds. It is a coarse-scale screening process based on percent disturbance, mass-movement potential, drainage efficiency and other watershed characteristics. In general, the size of the analysis area ranges from 10-100 square miles, which corresponds to the subsection scale of the terrestrial hierarchy and the sub-watershed scale in the aquatic hierarchy outlined by the National Hierarchy of Ecological Units.

Individual watersheds are the basic unit of analysis. Two risk indices are developed for each watershed which evaluate (1) characteristics related to sediment supply and transport, and (2) the extent of storage (depositional) streams. Watersheds with high transport potential have steeper slopes, more unstable soils, and higher stream densities. Watersheds with a high storage potential have higher densities of low-gradient depositional streams for medium and long term sediment storage.

The transport and storage indices are combined into an overall Sediment Risk Index (SRI) under the assumption that watersheds with high combinations of storage potential and transport potential represent the highest levels of concern for management activities. Watersheds with a high SRI usually have steep, unstable valley walls which drain into well-developed, low-gradient valley bottom channels. The following discusses the development of each index.

Watershed Level SRA compares similar attributes as the Landscape Level but can compare subwatersheds within one large watershed. The watershed level model can also compare

alternatives, the Landscape level does not. A watershed level SRA is discussed for watersheds E76A Painted Creek and E79A Sea Level Creek.

Interpretations

Watershed morphology and disturbance help identify and rank areas according to potential for sediment production and deposition. The SRI and PII do not provide yield estimates, sediment discharge estimates, route sediment, nor identify impact thresholds; but they do indicate the location and potential significance of sediment sources and depositional areas within the watershed based on measured characteristics known to correlate with sediment transport and deposition. In general, higher transport scores are observed in tributary sub-basins and those reaches with a relatively high gradient and discharge. Higher depositional scores are observed in reaches with a high density of large, low-gradient floodplain channels.

Landscape

Value Comparison Units

VCUs generally follow watershed boundaries and for analysis purposes can be considered to be generally equivalent to watersheds. There are 92 watersheds in the Project Area contained in six VCUs. The VCU provide a means for dividing the landscape into manageable sets of watersheds that typically share similar geomorphic characteristics. For example, the watersheds in Minx Flats VCU 7560 are generally small, less than 0.3 square miles. Elevations rarely exceed 500 feet and the terrain is relatively flat, hence the name. Depositional streams dominate the watersheds that provide abundant and quality habitat to both resident and anadromous species. In contrast, the Carroll Inlet VCU 7460 contains watersheds where the average size exceeds five square miles. Elevations reach upwards of 1,800 feet in almost all of those watersheds and the ground is steep. The streams are usually contained except where there are large lakes as in Watershed D79A Saddle Lakes. The Carroll Inlet VCU contains less anadromous fish habitat because there are usually barriers within 2,500 meters or less from salt water. The landscape analysis does not compare watersheds within VCUs. The VCU provides a means with which to discuss and display watersheds within the Project Area.

Individual VCU maps display detail about the watersheds; harvest units, fens, implementation buffers, riparian soils, MMI 3 and 4 soils, estuarine soils, minor code (watershed number), streams, and watershed boundaries. The individual VCU maps provide a reference to locate watersheds that are discussed.

Overall Concerns

Table Watershed-1 displays the relative watershed ratings, or overall concern, in terms of the eight core topics outlined in the watershed analysis handbook. The table is designed to help you see what the concerns might be for each watershed within the Project Area. Mass slope/erosion (potential for landslides), hydrology, stream channel, human uses (timber harvest and roads), and vegetation are assessed using the Sediment Risk Assessment (SRA) models. The cumulative score is expressed as low medium or high in the SRI column. Species and habitat are based on the amount of habitat available to anadromous or resident fish. There are essentially three consumptive human uses within the project area: timber and commercial, recreational, and subsistence hunting, and fishing. The sport or subsistence fishery scores are subjective ratings based on local knowledge of existing use. Because terrestrial wildlife species are not restricted to habitats within watershed boundaries, hunting is addressed in other sections of this EIS, see Wildlife, Subsistence, and Recreation sections in Volume I. Level of human disturbance is the amount of watershed that is harvested or roaded. The overall concern is a cumulative score of the preceding issues.

Because stream temperatures and pH in Southeast Alaska generally do not exceed water quality standards established by the Alaska Department of Environmental Conservation (ADEC) the table does not address water quality in terms of temperature or pH. Sedimentation as a result of logging and roading are the water quality issues evaluated in the

D Appendix

Sediment Risk Index (SRI) as the potential for increased sediment to streams based on the SRA.

Table Watershed-1
Summary Table of Project Area Watersheds

ADF&G Number and Name	Minor Code	VCU	(1) Sediment Risk Index	(2) Anadromous Fish Habitat	(2) Resident Fish Habitat	(3) Sport or Subsistence Fishery	(4) Level of Human Disturbance	(5) Overall Concern
101-43-10750 Saddle Lakes	D79A	7460 Carroll Inlet	L	H	H	M	L	H (10)
101-45-10730 Gunsight Creek	D86A	7460 Carroll Inlet	M	H	H	L	L	H (10)
No Name or Number	I15A	7460 Carroll Inlet	M	L	H	L	H	H (10)
101-45-10870 Easy Creek	D96A	7460 Carroll Inlet	M	H	H	L	M	H (11)
No Name or Number	I13A	7460 Carroll Inlet	M	H	H	M	M	H (12)
101-45-10815	D93A	7460 Carroll Inlet	L	N	N	N	L	L (2)
No Name or Number	D92A	7460 Carroll Inlet	L	N	L	L	L	L (4)
101-43-10630	D85A	7460 Carroll Inlet	M	M	H	L	L	M (9)
101-45-10860 Marble Creek	D87A	7460 Carroll Inlet	M	M	H	L	M	M (9)
101-45-10830 Licking Creek	D91A	7460 Carroll Inlet	M	H	M	L	L	M (9)
101-45-10850 Calamity Creek	I14A	7460 Carroll Inlet	M	L	H	M	L	M (9)
101-45-10600	E48A	7530 Gnat	M	H	H	L	L	H (10)
No Name or Number	E49A	7530 Gnat	M	H	H	L	L	H (10)
101-45-10670	E50A	7530 Gnat	L	H	H	M	L	H (10)
No Name or Number	E22A	7530 Gnat	H	L	H	M	L	H (10)
101-45-10900	E75A	7530 Gnat	H	L	H	H	L	H (11)
101-45-10940	E42A	7530 Gnat	M	H	H	H	L	H (12)
101-45-10880 Painted Creek	E76A	7530 Gnat	H	H	H	H	M	H (14)
No Name or Number	DV9A	7530 Gnat	M	N	L	N	L	L (4)
101-45-10710	E53A	7530 Gnat	L	L	N	L	L	L (4)
No Name or Number	EY1A	7530 Gnat	L	L	L	N	H	L (6)
No Name or Number	DW1A	7530 Gnat	L	H	L	L	L	M (7)
101-45-10690	E52A	7530 Gnat	M	L	L	L	M	M (7)
No Name or Number	EY5A	7530 Gnat	L	M	M	L	L	M (7)
No Name or Number	EY3A	7530 Gnat	L	L	M	L	H	M (8)
101-43-10470	E80A	7552 Gokachin	M	H	H	L	L	H (10)
101-43-10410 Sea Level Creek	E79A	7552 Gokachin	L	H	H	H	L	H (11)
No Name or Number	E81A	7552 Gokachin	L	N	M	N	L	L (4)
No Name or Number	FA2A	7552 Gokachin	L	L	L	L	L	L (5)
101-43-10330 Fish Creek	D97A	7542 Fish Creek	L	H	H	H	L	H (11)
No Name or Number	FA1A	7560 Minx Flat	M	L	H	M	M	H (10)
101-43-10290	E77A	7560 Minx Flat	H	L	H	M	M	H (11)
101-43-10230	E73A	7560 Minx Flat	H	H	H	M	L	H (12)
101-43-10230	E72A	7560 Minx Flat	H	H	H	M	M	H (13)
No Name or Number	E29A	7560 Minx Flat	L	N	N	N	L	L (2)
101-43-10080	E68A	7560 Minx Flat	L	L	L	N	L	L (4)
No Name or Number	E74A	7560 Minx Flat	L	L	L	N	L	L (4)
101-43-10150	E69A	7560 Minx Flat	M	L	L	N	M	L (6)
101-43-10160	E70A	7560 Minx Flat	M	L	L	N	M	L (6)
No Name or Number	E28A	7560 Minx Flat	L	L	L	L	M	L (6)
No Name or Number	EY6A	7560 Minx Flat	L	H	L	L	L	M (7)
101-43-10180	E71A	7560 Minx Flat	L	L	H	L	M	M (8)
No Name or Number	EX9A	7570 Thorne Arm	L	N	N	N	L	L (2)
101-43-10095	EX8A	7570 Thorne Arm	L	L	N	L	L	L (4)
101-43-10560	E83A	7570 Thorne Arm	L	L	M	L	L	L (6)
101-45-10590	FA3A	7570 Thorne Arm	L	L	L	L	M	L (6)
No Name or Number	E84A	7570 Thorne Arm	M	L	M	L	L	M (7)
No Name or Number	FA4A	7570 Thorne Arm	L	M	L	L	M	M (7)
No Name or Number	E82A	7570 Thorne Arm	L	H	M	L	L	M (8)
101-43-10630	E85A	7570 Thorne Arm	M	M	H	L	L	M (9)
No Activity		7590 Moth Bay						N/A

Source: R. Sainz Ketchikan Ranger District 1998

1. Sediment Risk Index from Table Aquatic-6 (chapter 3, Volume I) where: 0-30 = Low, 31-60 = Moderate, and 61-100 = High

2. Rating for both anadromous and resident fish habitat is based on length of habitat available:

length < 1,000' = Low, length > 1,000' and < 1 mile = Moderate, length > 1 mile = High

3. Rating for sport of subsistence fishery based on local knowledge and ADF&G Resource Maps

4. Level of human disturbance based on percent of watershed harvested or roaded:

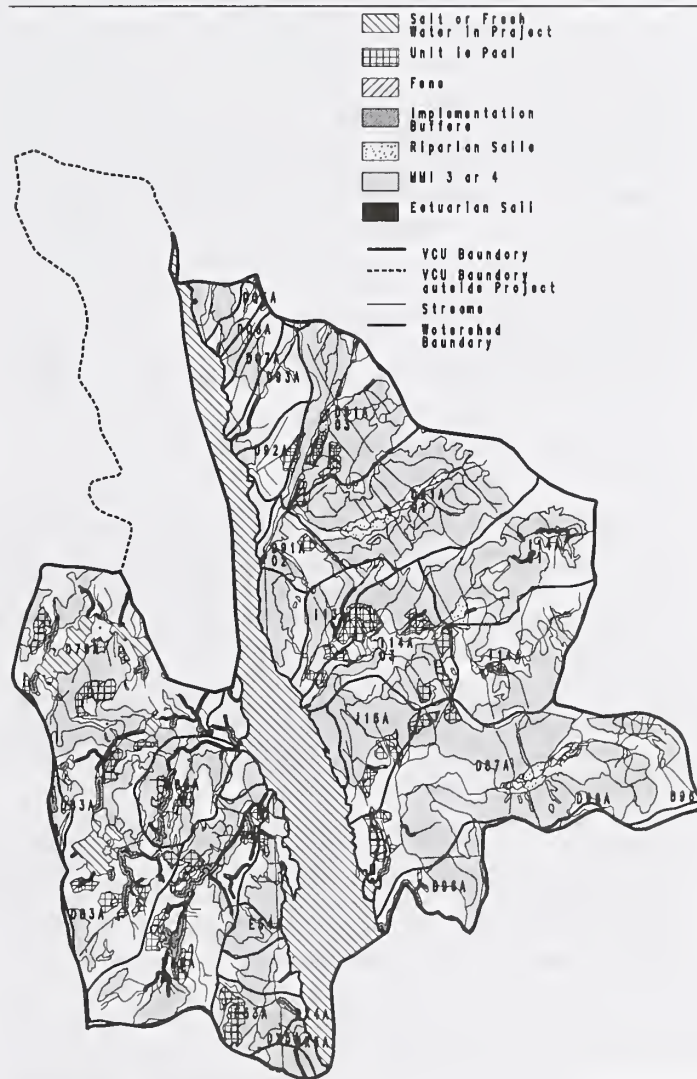
Use < 20% = Low, Use < 40% and > 20% = Moderate, Use > 40% = High

5. Overall Concern is sum of five scores where: N = 0, L = 1, M = 2, and H = 3; scores between 2-6 = Low, 7-9 = Moderate, and 10-15 = high.

VCU 7460 Carroll Inlet

Carroll Inlet VCU (see Figure Watershed-2) contains eight watersheds with proposed harvest units, of which five are major watersheds. The major watershed names starting from northeast moving clockwise to northwest are: Licking Creek (D91A), Calamity Creek (I14A), Marble Creek (D87A), Gunsight Creek (D86A), and North Saddle and South Saddle Lakes (D79A). These watersheds together contain approximately 5.7 miles of anadromous habitat. The longest anadromous reach is in the Licking Creek watershed with approximately 1.7 miles of anadromous stream.

Figure Watershed-2
VCU 7460 Carroll Inlet



Source: J. A. Llanos Ketchikan Ranger District GIS, 1997

D Appendix

Watershed Name: Licking Creek

Watershed Number: D91A

ADF&G Number: 101-45-10830

VCU: Carroll Inlet

The SRI Value = 38; SRI rank = 22

PII Value =10 ; PII rank = 26

Watershed D91A covers approximately 6.4 square miles, has no lake habitat, and has a maximum elevation of 2,500 feet above sea level. This 4th order watershed contains approximately 21 miles of stream channel. Sixty-five percent of the watershed is characterized as MMI class 3 or 4. Eighty-one percent of the stream channels in this watershed transport sediment; 6 percent of the stream channels store sediment.

The ADF&G stream catalog shows pink, coho, and chum salmon use this stream. The GIS layer identifies approximately 1.8 miles class I habitat; 100 percent of anadromous habitat is not complex. There is approximately 2 miles of fair quality resident habitat.

Watershed D91A contains 4.5 miles of existing road. Twenty-four percent of this watershed has been harvested in the last 30 years. Approximately 1.1 mile of class II stream pass through units harvested prior to the passage of TTRA. Alternative 2 proposes no action in this watershed. Watershed D91A has a Potential Impact Index of 10, which ranks this watershed 26th for PII score among the 53 watersheds ranked for sediment risk in the Sea Level project area .

Watershed Number: I13A

Creek Name: None

ADF&G Number: None

VCU 7460: Carroll Inlet

SRI value = 48; SRI rank =18

PII value =50; PII rank =8

Watershed I13A covers approximately 1 square mile, has no lake habitat, and has a maximum elevation of 1500 feet above sea level. This 3rd order watershed contains approximately 4 miles of stream channel. Forty-three percent of the watershed is characterized as MMI class 3 or 4. Eighty-five percent of the stream channels in this watershed transport sediment; there is very little depositional stream channel present.

The stream system in watershed I13A is not listed in the ADF&G catalog. Anadromous habitat is not present. Approximately 2 miles of stream provide resident salmonid habitat. Most of the resident habitat is not high complexity habitat; 1.4 miles of the resident habitat consists of high gradient (HC) channels.

Watershed I13A contains 1.3 miles of existing road. Twenty-four percent of this watershed has been harvested in the last 30 years. Alternative 2 proposes to add an additional 1.5 miles of road and harvest an additional 7 percent of the watershed. Watershed I13A has a Potential Impact Index value of 50, ranking this watershed 8th among the 53 watersheds ranked for sediment risk in the Sea Level project area.

Watershed Name: Calamity Creek

Watershed Number: I14A

ADF&G Number: 101-45-10850

VCU: Carroll Inlet

The SRI value = 33; SRI rank =29

The PII value =8 ; PII rank =29

Calamity Creek watershed covers 6.6 square miles, contains no lake habitat, and has a maximum elevation of 3800 feet above sea level. This 4th order watershed contains approximately 20.7 miles of stream channel. Fifty percent of the watershed is characterized as MMI class 3 or 4. Seventy-two percent of the stream channels in this watershed transport sediment. There is little depositional stream channel present.

Forest Service biologists surveyed the watershed for fisheries habitat in 1987 to verify presence of anadromous and resident fish and their respective habitat. Salmon habitat is only present in the first 200 meters of the stream. ADF&G has not conducted escapement surveys in this watershed. The ADF&G stream catalog shows coho and pink salmon use this stream. Class I habitat present in this watershed is not complex; 100 percent of anadromous habitat consists of high gradient (HC) stream channel. There are approximately six miles of moderate gradient (MM) resident habitat.

Watershed I14A contains approximately 4.5 miles of existing road. Eleven percent of this watershed has been harvested in the last 30 years. Approximately 0.75 miles of class II stream pass through units harvested prior to the passage of TTRA. Alternative 2 proposes to build 1.8 miles of road and harvest an additional 2 percent of the watershed. Watershed I14A has a Potential Impact Index value of 8, ranking this watershed 29th among the 53 watersheds ranked for sediment risk in the Sea Level project area.

Watershed Number: I15A

Creek Name: None

ADF&G Number: None

VCU 7460: Carroll Inlet

SRI value = 46; SRI rank =21

PII value =39; PII rank =10

Watershed I15A covers approximately 1.3 square miles, has no lake habitat, and has a maximum elevation of 1100 feet above sea level. This 3rd order watershed contains approximately 4.5 miles of stream channel. Sixty percent of the watershed is characterized as MMI class 3 or 4. Eighty-five percent of the stream channels in this watershed transport sediment; there is very little depositional stream channel present.

The stream system in watershed I15A is not listed in the ADF&G catalog. Anadromous habitat is not present. Approximately 3.3 miles of stream provide resident salmonid habitat. Most of the resident habitat is not high complexity habitat; only 0.6 miles of the resident habitat consists of moderate gradient alluvial (MM) channels.

Watershed I15A contains 2.6 miles of existing road. Thirty-nine percent of this watershed has been harvested in the last 30 years. Alternative 2 proposes to add an additional 1.2 miles of road and harvest an additional 6.5 percent of the watershed. Watershed I15A has a Potential Impact Index value of 39, ranking this watershed 10th among the 53 watersheds ranked for sediment risk in the Sea Level project area.

D Appendix

Watershed Number: D87A
Creek Name: Marble
ADF&G Number: 101-45-10860
VCU 7460: Carroll Inlet
SRI value =52; SRI rank =17
PII value =13; PII rank =24

Watershed D87A covers approximately 5.9 square miles, has no lake or pond habitat, and has a maximum elevation of 1600 feet above sea level. This 3rd order watershed contains approximately 17 miles of stream channel. Fifty-five percent of the watershed is characterized as MMI class 3 or 4. Sixty-four percent of the stream channels in this watershed transport sediment; sixteen percent of the stream channels store sediment. Some karst is located in this watershed.

The ADF&G stream catalog shows pink salmon use the first 100 yards of Marble Creek above saltwater; a barrier blocks upstream anadromous migration. The GIS database identifies 8.5 miles of class II habitat; 35 percent is high complexity floodplain habitat, 45 percent is moderate gradient (MM) habitat, and the rest is low complexity habitat.

Watershed D87A contains approximately 9.3 miles of existing road. Twenty-nine percent of this watershed has been harvested in the last 30 years. Approximately 3.3 miles of class II stream pass through units harvested prior to the passage of TTRA. Alternative 2 proposes to build 1.5 miles of road and harvest 2 percent of the watershed. Watershed D87A has a Potential Impact Index value of 13, ranking this watershed 24th among the 53 watersheds ranked for sediment risk in the Sea Level project area.

Watershed Number: E53A
Creek Name: Happy Humpy Creek
ADF&G Number: 101-45-10710
VCU 7460: Carroll Inlet
SRI value =29; SRI rank = 32
PII value =1; PII rank= tied for lowest risk

Watershed E53A covers approximately 0.8 square miles, has no lake or pond habitat, and has a maximum elevation of 1500 feet above sea level. This 2nd order watershed contains approximately 1.3 miles of stream channel. Seventy percent of the watershed is characterized as MMI class 3 or 4. Seventy-seven percent of the stream channels in this watershed transport sediment; 23 percent of the stream channels store sediment.

The ADF&G stream catalog shows pinks, coho, cutthroat, and Dolly Varden use this stream. Approximately 0.3 miles of stream channel are class I habitat. All class I habitat is high complexity floodplain habitat. There is no resident habitat.

Watershed E53A contains 0.8 miles of existing road. Thirteen percent of the watershed has been harvested. Alternative 2 does not propose to build road and harvest timber in watershed E53A. However, harvest units in this watershed were displayed in the Notice Of Intent and could be included in FEIS alternatives. Watershed E53A has a Potential Impact Index of 1, which ranks this watershed as the lowest potential risk (along with numerous others) among the 53 watersheds ranked for sediment risk in the Sea Level project area.

Watershed Number: D85A
 Creek Name: None
 ADF&G Number: None
 VCU 7460: Carroll Inlet
 SRI value = 60; SRI rank =12
 PII value =46; PII rank = 9

Watershed D85A covers approximately 1.3 square miles, has 13 acres of lakes and ponds, and has a maximum elevation of 1400 feet. This 3rd order watershed contains approximately 5.3 miles of stream. Forty-nine percent of this watershed is characterized as MMI class 3 or 4. Seventy-six percent of the stream channels in this watershed transport sediment; 20 percent of the stream channels store sediment.

The stream system in watershed D85A is not listed in the ADF&G Anadromous Stream Catalog. The GIS database identifies the first 0.4 mile above saltwater as anadromous habitat. Approximately 1.5 miles of stream provide resident salmonid habitat. Approximately a third of the resident habitat is high complexity (pond or floodplain).

Watershed D85A contains 1.6 miles of existing road. Eight percent of this watershed has been harvested in the last 30 years. Alternative 2 proposes to add an additional 0.65 miles of road and harvest an additional 5% of the watershed. Watershed D85A has Potential Impact Index value of 46, ranking this watershed 9th among the 53 watersheds ranked for sediment risk in the Sea Level project area.

Watershed Number: D86A
 Creek Name: Gunsight
 ADF&G Number: 101-45-10730
 VCU: Carroll Inlet
 SRI value = 53; SRI rank =15
 PII value =34; PII rank = 11

Barrier Falls on Gunsight Creek.



Watershed D86A covers approximately 3.2 square miles. The watershed contains approximately two acres of lake habitat. The watershed is comprised of one fourth order basin with approximately 15.6 miles of stream. The basin is approximately one mile wide. The relief makes this watershed very contained. The ridges on both sides of the creek abruptly rise to an 800 foot elevation within 800 feet of the creek. The highest point on the ridge is 1200 feet and is located approximately 0.5 miles from Gunsight creek at the valley bottom. The channel is a low gradient contained throughout most of the watershed. The watershed functions as a high energy chute transporting sediment immediately downstream. Twenty-seven percent of the watershed is characterized as MMI class 3 or 4. Seventy-three percent of the stream channels in this watershed transport sediment; fifteen percent of the stream channels store sediment.

In 1990, Forest Service Biologists completed a Basin Wide Surveys (BWS) to quantify habitat, determine fish presence, and identify migration barriers. A partial barrier was identified approximately 105 meters upstream of the intertidal zone (ITZ). A 15 meter barrier was identified at approximately 225 meters upstream from the ITZ. Only pink salmon were observed spawning below the falls. This stream has a run of coho salmon since it is listed as a coho stream by ADF&G. Above the falls Dolly Varden were abundant and appeared to be the dominant species in this watershed. There are 8 miles of fair quality resident habitat.

Approximately 2.2 miles of road were constructed within the last five years for the Shelter Cove Timber Sale. All stream crossings in the Shelter Cove Sale Area meet fish passage requirements. Alternative 2 proposes to build 3.3 miles of road and harvest seven percent of

the watershed. Watershed D86A has a Potential Impact Index value of 34, ranking this watershed 11th among the 53 watersheds ranked for sediment risk in the Sea Level project area. The predominant channel type for this watershed functions as sediment deposition. This indicates that any sediment created by logging or road reconstruction would likely have adverse affects to fish habitat if standards and guides were not adhered to. Recommendations will be made between draft and final EIS to helicopter log portions of this watershed.

Watershed Number: D79A

Creek Name: none

VCU 755: Carroll Inlet

ADF&G Number: 101-43-10750

The SRI value = 29; SRI rank =33

The PII value = 16; PII rank =21

The Saddle Lakes watershed covers 9.2 square mile contains over 480 acres of lake and pond habitat. There are approximately 19.8 miles of stream channel. Thirty percent of the watershed is characterized as MMI class 3 or 4. Eighty-seven percent of the stream channels in this watershed transport sediment with no depositional streams.

The ADF&G stream catalog shows pink, chum, and coho salmon use this stream. In 1990, the Forest Service conducted basin wide surveys to quantify habitat, determine fish presence, and identify barriers. On North Saddle Lake, a 15 meter barrier located approximately one mile upstream from salt water precludes anadromous fish migration. There are approximately six miles of class I adfluvial habitat; ninety percent is high complexity floodplain habitat.

Approximately 10.4 miles of road were constructed within the last five years for the Shelter Cove Timber Sale. Within the last 30 years, approximately 2 percent of the watershed has been harvested. Alternative 2 proposes to build an additional 4.4 miles of road and harvest four percent of the watershed. Watershed D79A has a Potential Impact Index value of 16, ranking this watershed 21st among the 53 watersheds ranked for sediment risk in the Sea Level project area.

VCU 7530 Gnat

Gnat VCU (see figure Watershed-3) is the largest VCU in the project area and it dissects the Project Area. There are fifteen documented anadromous watersheds in this VCU including the three that are located on private land. Four of the highest rated watersheds for Sediment Risk are in this watershed. The major watersheds names starting from north east moving clockwise to northwest are: Painted Creek (E76A), Spit Creek (E42A), and Buckhorn Creek (E50A). The watersheds in this VCU contain approximately 51 miles of anadromous habitat. The longest anadromous reach is in the Painted Creek watershed with approximately 19 miles of anadromous stream. One floating dock is located in this VCU at Shoal Cove. This provides easy access to stream fishing by anglers accessing these watersheds by boat.

Figure Watershed-3
VCU 7530 Gnat



Source: J. A. Llanos Ketchikan Ranger District GIS, 1997

D Appendix

Watershed Number: D96A

Creek Name: Easy

ADF&G Number: 101-45-10870

VCU 716: Carroll

SRI value =48; SRI rank =20

PII value =7; PII rank 31

Watershed D96A covers approximately 6 square miles, has 7 acres of lake or pond habitat, and a maximum elevation of 1500 feet above sea level. This 4th order watershed contains approximately 23 miles of stream channel. Fifty-three percent of the watershed is characterized as MMI class 3 or 4. Most of the stream channels in this watershed transport sediment; 10 percent of the stream channels store sediment.

The ADF&G stream catalog shows pinks use this stream. A 60-foot waterfall blocks anadromous passage 800 feet upstream of the intertidal zone. Above the barrier, there are approximately 11 miles of resident salmonid habitat (class II). Ninety percent of the resident habitat consists of moderate gradient channel types (MM and MC).

Watershed D96A contains 3.2 miles of existing road. Twenty-nine percent of this watershed has been harvested in the last 30 years. Almost 9 miles of class II stream channel pass through units harvested prior to the passage of TTRA. Alternative 2 proposes to build 1.2 miles of road and harvest 1 percent of the watershed. Watershed D96A has a Potential Impact Index value of 7, ranking this watershed 31st among the 53 watersheds ranked for sediment risk in the Sea Level project area.

Watershed Number: E76A

Creek Name: Painted Creek

ADF&G Number: 101-45-10880

VCU: Gnat

The SRI value = 100; SRI rank = 1

The PII value = 75; PII rank = 2

Painted Creek watershed covers approximately 11 miles. Because of the sensitivity rating and complexity of this watershed a Tier II Watershed Level Analysis was required. That analysis is discussed later, see Tier II SRA: Painted Creek E76A.

Number: E75A

Creek Name: Shoal

ADF&G Number: 101-45-10890

VCU: Gnat

The SRI value = 71; SRI rank = 6

The PII value = 100; PII rank = 1

Shoal Cove watershed covers approximately one square mile. The watershed contains no lake habitat and approximately 6.9 miles of stream. The elevation range is from salt water to 800 feet. The predominant ridges are located at the head waters or eastern portion of the watershed. The watershed is approximately one third of a mile wide and extends inland approximately 1.8 miles. Eight percent of the watershed is characterized as MMI class 3 or 4. Fifty two percent of the stream channels in this watershed transport sediment; and 48 percent of the stream channels store sediment.

In 1995 the Forest Service surveyed this watershed for fisheries habitat to verify presence of anadromous and resident fish and respective habitat. The survey identified a possible barrier

to anadromous fish migration at approximately 328 meters (1075 feet) from salt water. Resident fish habitat extends approximately 1.4 miles upstream into the watershed.

Within the last 30 years there have been 123 acres of timber harvested. The watershed is dominated by sediment deposition channel types. The depositional channel types in this watershed flow through slow moving muskeg waters. The transport streams are located at the headwaters of the watershed and at the outlet. There are very little MMI 3 and 4 soils (59 acres) in this watershed. Because the MMI 3 and 4 soils are located at the headwaters adjustment of process group standards and guides in this watershed is not likely.

Watershed Number: EZ2A

Creek Name: Wing

ADF&G Number: No Number

VCU: Gnat

The SRI value = 71; SRI rank = 5

The PII value = 56; PII rank = 6

The 0.8 square mile Wing Creek watershed contains one acre of lake habitat and approximately 4.7 miles of stream habitat. This watershed ranked as the sixth highest watershed for potential sediment risk. Seventy-four percent of the total stream habitat is depositional stream in the form of Palustrine channel type. The watershed is relatively flat and consistently low in elevation. The elevation ranges from sea level to 400 feet. The watershed contains only 20 acres of MMI 3 or soils. This means that the chances of sediment occurring as a result of landslides is relatively low. Also the watershed energy is very low.

In 1995 Forest Service Biologists surveyed this watershed for fisheries habitat to verify presence of anadromous and resident fish and respective habitat. The survey identified a fish migration barrier at approximately 66 meters (217 feet) from salt water. A beaver pond complex dominates the southern portion of the watershed. Resident cutthroat trout and Dolly Varden were captured throughout the watershed. The ADF&G has no data on this system and does not have it listed as an anadromous stream.

In the last 30 years this watershed received approximately 51 acres of timber harvest. There are 0.6 miles of existing road. The depositional channel types in this watershed flow through slow moving muskeg waters. The dominant channel process group for this watershed is depositional streams. The MMI 3 and 4 soils are located along the periphery of the watershed near salt water. Landslides in these areas would not affect existing channels within the watershed.

Watershed Number: EY9A

Creek Name: Serenity

ADF&G Number: none

VCU 7530: Gnat

Because watershed EY9A is less than one-half square mile it rated zero for SRI and PII. Watershed EY9A covers approximately 0.1 square miles, has no lake or pond habitat, and has a maximum elevation of 100 feet above sea level. This 2nd order watershed contains approximately 0.5 miles of stream channel. The GIS identified this watershed as having no MMI class 3 or 4. All stream channels in this watershed transport sediment.

Forest Service surveys observed resident cutthroat in the class II habitat. This stream system is not listed in the ADF&G Catalog of Anadromous Streams. Surveys identified an impassable barrier located approximately 90 yards upstream from saltwater. There are 0.2 miles of moderate gradient (MC) class II habitat above the barrier.

D Appendix

Alternative 2 proposes to build 0.2 miles of road and harvest 5 percent of the watershed. The 5 percent harvest acres is deferred which equates to no proposed harvest. Within the last 30 years there has been no timber harvest.

Watershed Number: EY3A

Creek Name: Gnat

ADF&G Number: 101-45-10920

VCU 7530: Gnat

Because watershed EY3A is less than one-half square mile it rated zero for SRI and PII. Watershed EY3A covers approximately 0.4 square miles, has no lake or pond habitat, and has a maximum elevation of 700 feet above sea level. This 2nd order watershed contains approximately 1.2 miles of stream channel. Nineteen percent of the watershed is characterized as MMI class 3 or 4. Forty-two percent of the stream channels in this watershed transport sediment while 17 percent of the stream channels store sediment.

The ADF&G stream catalog shows coho and pink salmon use this stream and field surveys observed coho, pink and resident salmonids. Approximately 0.4 miles of Gnat Creek is class I habitat. All the class I habitat is moderate gradient habitat (MC). There is approximately 0.8 mile of class II habitat. Seventy percent is high complexity palustrine habitat.

Watershed EY3A contains 0.8 miles of existing road. Fifty-three of this watershed has been harvested in the last 30 years. Approximately 0.3 miles of class I habitat and 0.5 miles of class II stream channel pass through units harvested prior to the passage of TTRA. Alternative 2 proposes to build 0.3 mile of road and harvest an additional 4 percent of the watershed. Watershed EY3A has a Potential Impact Index value of I, which ranks this watershed as the lowest potential risk (along with numerous others) among the 53 watersheds ranked for sediment risk in the Sea Level project area.

Watershed Number: DW1A

Creek Name: none

ADF&G Number: none

VCU 7530: Gnat

SRI value =16; SRI rank =42

PII value =9; PII rank = 28

Watershed DW1A covers approximately 0.9 square miles, has no lake or pond habitat, and has a maximum elevation of 300 feet above sea level. This first order watershed contains approximately 1.5 miles of stream channel. There are no MMI class 3 or 4 soils in this watershed. Forty percent of the stream channels in this watershed transport sediment; 20 percent of the stream channels store sediment.

The streams in watershed DW1A are not listed in the ADF&G catalog. The GIS database identifies approximately 1.1 miles as class I habitat. Twenty percent is high complexity floodplain habitat, 75 percent is moderate gradient habitat (MM) and the rest is low complexity. There is 0.4 mile of low complexity class II habitat in this watershed.

Watershed DW1A contains 0.4 mile of existing road. Eight percent of this watershed has been harvested in the last 30 years. Alternative 2 proposes to build 0.4 mile of road and harvest an additional 5 percent of the watershed. Watershed DW1A has a Potential Impact Index value of 9, ranking this watershed 28th among the 53 watersheds ranked for sediment risk in the Sea Level project area.

Watershed Number: E42A
Creek Name: Spit
ADF&G Number: 101-45-10940
VCU 7530: Gnat
SRI value =61; SRI rank =9
PII value =15; PII rank 20

Watershed E42A covers approximately 8.0 square miles, has 60 acres of lake and pond habitat, and has a maximum elevation of 700 feet above sea level. This 4th order watershed contains 30 miles of stream channel. Fifty-five percent of the watershed is characterized as MMI class 3 or 4. Seventy percent of the stream channels in this watershed transport sediment; twenty percent of the stream channels store sediment.

The ADF&G stream catalog shows pink, coho, and chum use this stream. Field surveys observed coho and steelhead juveniles. The GIS database identifies approximately 14.6 miles of Spit Creek, including lake and ponds, as class I habitat. Thirty-five percent is high complexity floodplain/lake habitat, and 65 percent is low gradient contained (LC) habitat. Approximately 8.8 miles of high gradient (HC) resident fish habitat was identified in the GIS database.

Watershed E42A contains 1.3 miles of existing road. Eight percent of this watershed has been harvested in the last 30 years. Approximately 0.8 mile of class I and 1.5 miles of class II stream pass through units harvested prior to the passage of TTRA. Alternative 2 proposes to build 2.7 miles of road and harvest two percent of the watershed. Watershed E42A has a Potential Impact Index value of 15, ranking this watershed 20th among the 53 watersheds ranked for sediment risk in the Sea Level project area.

Watershed Number: E48A
Creek Name: un-named
ADF&G Number: 101-45-10600
VCU 7530: Gnat
SRI value = 61; SRI rank =10
PII value =26; PII rank = 14

Watershed E48A covers approximately 1.7 square miles, has no lake or pond habitat, and has a maximum elevation of 1500 feet above sea level. The watershed is drained by a 3rd order stream system that contains approximately 6.4 miles of stream channel. Fifty-eight percent of the watershed is characterized as MMI class 3 or 4. Sixty-eight percent of the stream channels in this watershed transport sediment and fourteen percent of the stream channels store sediment.

The ADF&G stream catalog shows pinks and coho use the first 0.25 miles of stream above saltwater. The GIS identifies 2.4 stream miles as class I habitat: 14 percent is high complexity floodplain habitat, 19 percent is moderate gradient habitat (MM) and the rest is low complexity habitat. GIS identifies approximately 1.7 stream miles as class II habitat.

The lower two-thirds of watershed E48A is owned by the Cape Fox Corporation. Fifteen percent of the watershed has been harvested in the last 30 years, all on Cape Fox lands. Watershed E48A contains no existing road on National Forest System (NFS) lands. Alternative 2 proposes to build 1.5 miles of road and harvest 8 percent of the watershed. The potential harvest and road building would take place in the upper watershed on NFS land. Watershed E48A has a Potential Impact Index value of 14, ranking this watershed 14th among the 53 watersheds ranked for sediment risk in the Sea Level project area.

Watershed Number: E49A
Creek Name: un-named
ADF&G Number: 101-45-10640
VCU 7530: Gnat
SRI value = 54; SRI rank =14
PII value =18; PII rank 18

Watershed E49A covers approximately 3 square miles, has 1 acre of lake and pond habitat, and has a maximum elevation of 1000 feet above sea level. This 3rd order watershed contains approximately 10 miles of stream channel. Forty percent of the watershed is characterized as MMI class 3 or 4. Fifty percent of the stream channels in this watershed transport sediment; 25 percent of the stream channels store sediment.

The ADF&G stream catalog shows coho, pink, and chum use this stream. The GIS database identifies approximately 6.3 miles as class I habitat; 40 percent is high complexity floodplain habitat, 50 percent is moderate gradient habitat (MM), and the rest is low complexity. Most of the 1.9 miles of class II habitat is low complexity and high gradient (HC).

Watershed E49A contains 2.1 miles of existing road. Nine percent of this watershed has been harvested in the last 30 years. Alternative 2 proposes to build 2.1 miles of road and harvest 5 percent of the watershed. Watershed E49A has a Potential Impact Index value of 18, ranking this watershed 18th among the 53 watersheds ranked for sediment risk in the Sea Level project area.

Watershed Number: DV9A
Creek Name: un-named
ADF&G Number: none
VCU 7530 : Gnat
SRI value = 35; SRI rank=23
PII value =21; PII rank=16

Watershed DV9A covers approximately .8 square miles, has no lake and pond habitat, and has a maximum elevation of 400 feet above sea level. This 3rd order watershed contains approximately 2.3 miles of stream channel. Twelve percent of the watershed is characterized as MMI class 3 or 4. Thirty-five percent of the stream channels in this watershed transport sediment while 65 percent of the stream channels store sediment.

The stream system in watershed DV9A is not listed in the ADF&G catalog. The GIS database identifies 1.7 miles above saltwater as anadromous habitat. Approximately 0.5 miles of stream provide resident salmonid habitat; 80 percent of Class I habitat is high quality floodplain habitat. Most of the resident habitat identified in the GIS database is not high quality fish habitat; 0.5 mile of resident habitat consists of high gradient (HC) channels.

Watershed DV9A contains 0.6 mile of existing road. Timber harvest has not occurred in this watershed. Alternative 2 proposes to build 0.75 mile of road and harvest 5 percent of the watershed. Watershed DV9A has a Potential Impact Index value of 23, ranking this watershed 16th among the 53 watersheds ranked for sediment risk in the Sea Level project area. The sediment risk assessment for watershed DV9A may over-estimate PII value for this watershed. The topography of this watershed is relatively flat; there is a low percentage of sediment transport stream channels in this watershed.

Watershed Number: E50A
 Creek Name: Buckhorn
 ADF&G Number: 101-45-10670
 VCU 753: Gnat
 SRI value =28; SRI rank =32
 PII value =13; PII rank= 23

Watershed E50A covers approximately 5.3 square miles, has 158 acres of lake and pond habitat, and has a maximum elevation of 1,100 feet above sea level. This 3rd order watershed contains approximately 16.6 miles of stream channel. Sixty-three percent of the watershed is characterized as MMI class 3 or 4. Eighty-nine percent of the stream channels in this watershed transport sediment while 4 percent of the stream channels store sediment.

The ADF&G stream catalog shows coho, pink use this stream. Pink, chum, coho, and cutthroat were identified during ADF&G field surveys. GIS database identifies 6.1 miles of Buckhorn Creek as class I habitat: 5 percent is high complexity floodplain habitat, 80 percent is moderate gradient habitat (MM/MC), and 15 percent is low complexity. There are 6.4 miles of high gradient (HC) resident habitat identified in the GIS database.

Watershed E50A contains 1.57 miles existing road. Three percent of this watershed has been harvested in the last 30 years. Timber harvest in this watershed has occurred after TTRA was passed. Alternative 2 proposes to build 2.7 miles of road and harvest 3 percent of the watershed. Watershed E50A has a Potential Impact Index value of 13, ranking this watershed 23rd among the 53 watersheds ranked for sediment risk in the Sea Level project area.

Watershed Number: E52A
 Creek Name: un-named
 ADF&G Number: 101-45-10690
 VCU 753: Gnat
 SRI value = 38; SRI rank =21
 PII value =22; PII rank 15

Watershed E52A covers approximately 0.6 square mile, has no lake or pond habitat, and has a maximum elevation of 1100 feet above sea level. This 2nd order watershed contains approximately 1.6 miles of stream channel. Ninety percent of the watershed is characterized as MMI class 3 or 4. Sixty-two percent of the stream channels in this watershed transport sediment. There is very little depositional stream channel present.

The ADF&G stream catalog shows coho use this stream. ADF&G stream surveys confirm a barrier present 0.1 mile upstream from saltwater. Class I habitat present in this watershed is not complex; 100 percent of anadromous habitat consists of high gradient (HC) stream channel. There is approximately 0.5 mile of moderate gradient (MM) resident habitat.

Watershed E52A contains approximately 1.1 miles of existing road. Ten percent of this watershed has been harvested in the last 30 years. Approximately 0.3 mile of class II stream pass through units harvested prior to the passage of TTRA. Alternative 2 proposes to build 0.7 mile of road and harvest 6 percent of the watershed. Watershed E52A has a Potential Impact Index value of 22, ranking this watershed 15th among the 53 watersheds ranked for sediment risk in the Sea Level project area.

VCU 7560 Minx Flat

Minx Flat VCU (Figure Watershed-4) contains most of the watersheds that are less than 0.5 square mile. There are nine documented anadromous watersheds in this VCU. Three of the highest rated watersheds for Sediment Risk are in this watershed. There are no major watersheds in this VCU. The watersheds in this VCU contain approximately 20 miles of anadromous habitat. The longest anadromous reaches are in the watershed E73A with approximately 8.3 miles of anadromous stream.

Watershed Number: FA1A

Creek Name: Swing

ADF&G Number: 101-43-10320

VCU: Minx Flat

SRI value = 69; SRI rank = 7

PII value = 61; PII rank 4

The Swing Creek watershed covers approximately 1.1 square miles. There are 24 acres of lake habitat in this watershed. There are approximately 7.4 miles of stream with 1.1 miles of the stream functioning as depositional stream. There are 6.1 miles of transport stream located in this watershed. The lakes in this watershed are located at the valley bottom. The channels around the lake are palustrine. The lakes are surrounded by steep hills that contain all the transport process channels. There are no MMI 3 or 4 soils within this watershed.

In 1995 Forest Service Biologists surveyed this watershed for fisheries habitat to verify presence of anadromous and resident fish and respective habitat. The survey identified a fish migration barrier at approximately 108 meters (354 feet) from saltwater. Approximately 100 meters (328 feet) upstream the channel type changes to palustrine channel type which is formed by beaver dams. The PA5 channel type continues for approximately 700 meters (2,296 feet) before the channel type turns to a moderate gradient mixed control channel type MM1. The MM1 channel continues for approximately 300 meters (328 feet) before the stream gradient increases and the channel reverts to a high gradient contained channel type, HC3. The survey ended at the lake approximately 1,500 meters (4,922 feet) from salt water. Resident fish were observed throughout the entire mainstem of this watershed. The ADF&G has no record of habitat surveys or other information about this watershed.

Within the last 30 years this watershed received approximately 268 acres of timber harvest. There are approximately 2.7 miles of existing road. This watershed has received intensive management. The dominant channel types in this watershed are lake and palustrine habitat. These channel types typically retain sediment and other fine organic matter.

Figure Watershed-4
VCU 7560 Minx Flat



Source: J. A. Llanos Ketchikan Ranger District GIS, 1997.

Watershed Number: E69A
Creek Name: Serenity
ADF&G Number: 101-43-10150
VCU 757: Thorne Arm
SRI value = 39; SRI rank = 20
PII value = 31; PII rank = 12

Watershed E69A covers approximately 0.7 square mile, has no lake or pond habitat, and has a maximum elevation of 800 feet above sea level. This 2nd order watershed is drained by a stream system that contains approximately 2.7 miles of stream channel. Eighty-nine percent of the watershed is characterized as MMI class 3 or 4. Forty-three percent of the stream channels in this watershed transport sediment and 21 percent of the stream channels store sediment.

The ADF&G stream catalog shows pinks use this stream. Field surveys confirm pink and Dolly Varden use. Approximately 0.1 miles of Sherb Creek is class I habitat. A barrier is located at the upstream end of class I habitat. All of the class I habitat is high gradient (HC). There is an additional 0.2 mile of class II habitat above the barrier.

Watershed E69A contains 1.5 miles of existing road. Twenty-eight percent of this watershed has been harvested in the last 30 years. Alternative 2 proposes to build 0.7 mile of road and harvest 7 percent of the watershed. Watershed E69A has a Potential Impact Index value of 31, ranking this watershed 12th among the 53 watersheds analyzed in the Sea Level project area.

Watershed Number: E71A
Creek Name: un-named
ADF&G Number: 101-43-10180
VCU 756: Minx
SRI value = 16; SRI rank = 43
PII value = 20; PII rank = 19

Watershed E71A covers approximately 1.6 square miles, has no lake or pond habitat, and has a maximum elevation of 700 feet above sea level. This 2nd order watershed contains approximately 4.4 miles of stream channel. Nineteen percent of the watershed is characterized as MMI class 3 or 4. Seventy-seven percent of the stream channels in this watershed transport sediment while less than 5 percent of the stream channels store sediment.

The ADF&G stream catalog shows pinks use this stream; ADF&G field surveys identify an impassable barrier for anadromous fish 0.2 mile from saltwater. The class I habitat below the barrier is moderate complexity. Approximately 3.8 miles of stream provide resident salmonid habitat. Forty percent of the resident habitat consists of moderate gradient alluvial (MM) channels. The remainder of the class II habitat is high gradient (HC).

Watershed E71A contains 1.9 miles of existing road. Twenty-three percent of this watershed has been harvested in the last 30 years. Approximately 0.2 mile of class I and 0.5 mile of class II stream pass through units harvested prior to the passage of TTRA. About 0.2 mile of partial buffer left along the stream has blown down. Alternative 2 proposes to build 2 miles of road and harvest 9 percent of the watershed. Watershed E71A has a Potential Impact Index value of 20, ranking this watershed 19th among the 53 watersheds ranked for sediment risk in the Sea Level project area.

Watershed Number: EY1A

Creek Name: Daniel

ADF&G Number: 101-43-10190

VCU 756: Minx

Because watershed EY1A is less than one-half square mile it rated zero for SRI and PII. Watershed EY1A covers approximately 0.3 square mile, has no lake and pond habitat, and has a maximum elevation of 600 feet above sea level. This 2nd order watershed contains approximately 0.9 mile of stream channel. The GIS identified this watershed as having no MMI class 3 or 4. Eighty-nine percent of the stream channels in this watershed transport sediment.

The ADF&G stream catalog shows coho use this stream. No anadromous fish were seen during field surveys but resident fish were observed throughout the class II habitat. Field surveys identified an impassable barrier 200 yards upstream from saltwater. The stream channel between saltwater and the barrier is high gradient (HC) class I habitat. There is approximately 0.9 mile of high gradient (HC) class II stream channel above the barrier.

Watershed EY1A contains 0.1 mile of existing road. Forty-seven percent of this watershed has been harvested in the last 30 years. Approximately 0.3 mile of class I and 0.5 mile of class II stream channel pass through units harvested prior to the passage of TTRA. Alternative 2 proposes to build 0.2 mile of road and harvest 11 percent of the watershed.

Watershed Number: E72A

Creek Name: Clarki

ADF&G Number: 101-43-10230

VCU: Minx

SRI value =91; SRI rank =2

PII value =68; PII rank=3

Clarki Creek watershed covers approximately 1.1 square miles. The watershed contains three acres of lake habitat. The watershed is comprised of one fourth order basin with approximately 5.8 miles of stream. The basin is approximately one mile wide and extends approximately 1.1 miles into the valley from salt water. The basin is relatively flat with elevations peaking at approximately 100 feet. The watershed has 2.5 miles of depositional stream and 2.8 miles of transport stream. The palustrine streams (depositional) flow into low gradient contained streams (transport). The SRA model rated this watershed high because it assumes the transport channel types will transport sediment to the depositional streams. In this case, the depositional streams flow into the outlet transport streams that deliver sediment directly to salt water.

In 1995, Forest Service Biologists completed a Basin Wide (stream) Survey to quantify habitat, determine fish presence, and identify migration barriers. The stream survey started at salt water and progressed for 590 feet through an estuarine channel type. Within the ES1 section there was blowdown for approximately 350 feet. This wood creates diverse aquatic habitat and is not presently a barrier to anadromous fish migration. The channel type changes to LC1 at approximately 820 feet upstream from saltwater. At the channel type break, a change occurs as a result of clear-cut and the subsequent disturbance. Beaver pond habitat, (Palustrine (PA5) channel type) extended almost to the end of the stream (1.2 miles). Blowdown was observed throughout an 1,100 foot PA5 tributary. Although no adult salmon were observed, salmonid fry were observed throughout all reaches surveyed. The report states that at approximately one mile upstream, the stream forks. The eastern fork of the stream contained anadromous fish but the previous clearcut did not leave a buffer. All streams in this watershed are presumed to contain fish habitat.

D Appendix

Within the last 30 years approximately 177 acres have been harvested in this watershed. There are approximately two miles of existing road. There are only two acres of high or very high mass movement soils in this watershed. The location of the transport and depositional streams, as stated previously, indicate that this watershed may not be at a high risk as the model predicted. Previous harvest has had a direct effect on the increase of LWD in the system.

Watershed Number: E73A

Creek Name: Myops

ADF&G Number: 101-43-10230

VCU 756: Minx

SRI value =78; SRI rank =3

PII value =19; PII rank=17

Watershed E73A covers approximately 1.7 square miles, has 11 acres of lake and pond habitat, and has a maximum elevation of 200 feet above sea level. This 3rd order watershed contains approximately 9.6 miles of stream channel. Five percent of the watershed is characterized as MMI class 3 or 4. Twenty-two percent of the stream channels in this watershed transport sediment and 76 percent of the stream channels store sediment.

The ADF&G stream catalog shows coho and pinks use this stream. Field surveys observed juvenile coho, Dolly Varden, and cutthroat. GIS database identifies 8.3 miles of Myops Creek as class I habitat. All the class I habitat is high complexity floodplain/palustrine habitat. Beaver activity is present throughout this watershed. There is approximately 0.9 mile of resident habitat.

Watershed E73A contains 2.4 miles existing road. Eight percent of this watershed has been harvested in the last 25 years. Approximately 0.3 miles of class I stream pass through units harvested prior to the passage of TTRA. Alternative 2 proposes to build 0.7 miles of road and harvest two percent of the watershed. Watershed E73A has a Potential Impact Index value of 19, ranking this watershed 17th among the 53 watersheds ranked for sediment risk in the Sea Level project area. The sediment risk assessment for watershed E73A may over-estimate PII value for this watershed. The topography of this watershed is relatively flat; there is a low percentage of transport stream channels in this watershed.

Watershed Number: E78A

Creek Name: Haida

ADF&G Number: none

VCU 756: Minx

SRI value =48; SRI rank =19

PII value = 8; PII rank = 28

Watershed E78A covers approximately 1.2 square miles, has no lake or pond habitat, and has a maximum elevation of 500 feet above sea level. This 2nd order watershed contains approximately 1.6 miles of stream channel. Thirteen percent of the watershed is characterized as MMI class 3 or 4. Seventy-six percent of the stream channels in this watershed transport sediment and 12 percent of the stream channels store sediment.

This stream system in watershed E78A is not listed in the ADF&G catalog. Field surveys identified approximately 0.7 mile of class I habitat. No anadromous fish were seen or trapped but resident fish were trapped in both class I and II habitat. All the class I habitat is moderate gradient (MM) habitat. There is approximately 0.2 mile of low complexity high contained (HC) resident habitat.

Watershed E78A contains 0.2 mile of existing road. Five percent of this watershed has been harvested in the last 30 years. Approximately 0.5 mile of class I stream channel passes through units harvested prior to the passage of TTRA. Alternative 2 proposes to build 0.6 mile of road and harvest an additional 1 percent of the watershed. Watershed E78A has a Potential Impact Index value of 8, ranking this watershed 28th among the 53 watersheds ranked for sediment risk in the Sea Level project area.

Watershed Name: Whistler Creek

Watershed Number: E77A

ADF&G Number: 101-43-10290

VCU: Minx

SRI value = 75; SRI rank = 4

PII value = 57; PII rank = 5

The Whistler Creek watershed covers approximately 2.4 square miles. Approximately one-half square mile of the watershed is outside of the Project Area. The watershed contains 45 acres of lake habitat. The largest amount of lake habitat is located on the eastern portion of the watershed with other smaller lakes located on the western portion of the watershed. This watershed was not subdivided into sub-watersheds because it is not considered complex. The elevation of the mainstem ranges from 200 feet at its origin to approximately 80 feet near saltwater. Of the 11.8 miles of stream contained within this watershed, 8.8 miles are transport streams and only 0.8 mile is depositional stream. The depositional stream, in this case, is located halfway up the mainstem of the watershed.

A field survey identified a potential barrier to salmon migration approximately 980 feet from saltwater. The channel process is moderate gradient contained for the first 1,880 feet then it levels out to an FP type. One mile upstream, the channel gradient increased to change the channel type to an MC channel. This section of stream contains plenty of LWD. The LWD is from a blown down buffer that was left from the previous timber harvest. One coho was observed below the migration barrier. Resident cutthroat trout and Dolly Varden were trapped and observed throughout the mainstem of the watershed. Tributaries to the mainstem were qualitatively surveyed and identified marginal resident fish habitat.

Within the last 30 years there have been approximately 399 acres of timber harvested in this watershed. There are 3.1 miles of existing road. The depositional channels of this watershed start at approximately 980 feet up the mainstem. This means that any sediment transported has a high potential of settling in this area. The high and very high mass movement soils are located on both sides of the southeastern tributary. The southeastern tributary is also comprised of sediment deposition type channels.

Watershed Number: EZ9A

Creek Name: un-named

ADF&G Number: none

VCU 757: Minx Flat

SRI value =1 ; SRI rank =46

Because watershed EZ9A is less than one-half square mile it rated zero for SRI and PII. Watershed EZ9A covers approximately 0.1 square mile, has no lake or pond habitat, and has a maximum elevation of 1000 feet above sea level. This 1st order watershed contains approximately 0.2 mile of stream channel. All of this very small watershed is characterized as MMI class 3 or 4 and all of the stream channels in this watershed transport sediment.

Habitat and species information was gathered from the ADF&G Anadromous Stream Catalog and Forest Service GIS database. The stream in watershed EZ9A is not listed in the ADF&G catalog. Anadromous and resident habitat is not present in this watershed.

Watershed EZ9A contains 0.1 mile of existing road. Three percent of the watershed has been harvested in the last 30 years. Alternative 2 proposes to build 0.2 mile of road and harvest an additional 22 percent of the watershed.

VCU 7570 Thorne Arm

The VCU contains 9 cataloged anadromous watersheds. This VCU had harvest in the Elf Point Sale area in the last seven years (1991). A small old growth reserve is located along the western portion of this VCU. The reserve extends from the north boundary of watershed E68A along the west boundary to the south boundary of VCU 7570 (see Figure Watershed-5).

Watershed Number: E82A

Creek Name: un-named

ADF&G Number: none

VCU 757: Thorne Arm

SRI value =19; SRI rank = 37

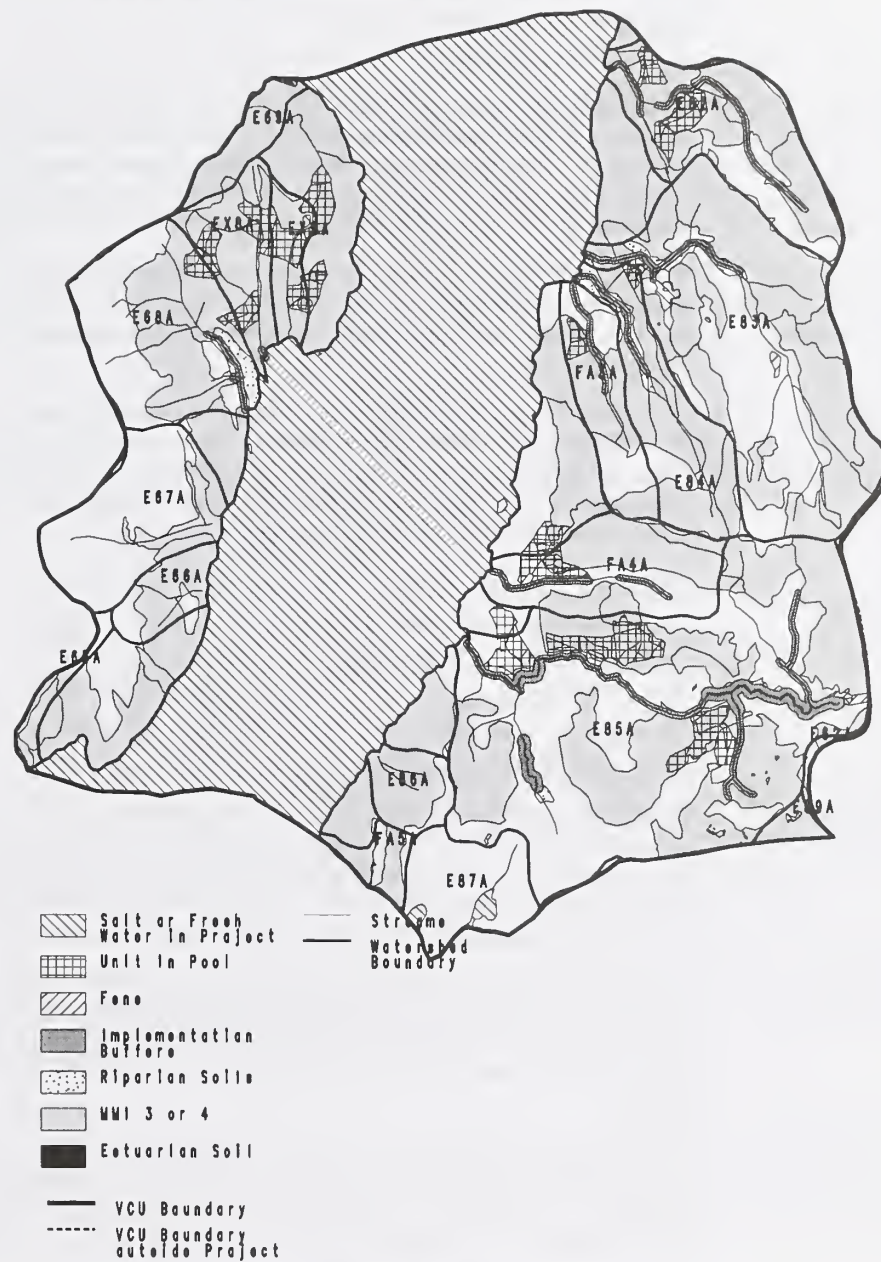
PII value =13 ; PII rank = 22

Watershed E82A covers approximately 1.1 square miles, has no lake or pond habitat, and has a maximum elevation of 1600 feet above sea level. This 2nd order watershed contains 2.8 miles of stream channel. Seventy-seven percent of the watershed is characterized as MMI class 3 or 4. Eighty-six percent of the stream channels in this watershed transport sediment; less than 1 percent of the stream channels store sediment.

The stream system in watershed E82A is not listed in the ADF&G catalog. Anadromous habitat is not present. Approximately 1.9 miles of class II stream provide resident salmonid habitat. Most of the resident habitat is not high complexity habitat; 0.4 mile of stream channel consists of moderate gradient alluvial (MM) channel, the rest is high gradient.

Watershed E82A contains no existing road. Timber harvest has not occurred in this watershed. Alternative 2 proposes to build 1.4 miles of road and harvest 2 percent of the watershed. Watershed E82A has a Potential Impact Index value of 13, ranking this watershed 22nd among the 53 watersheds ranked for sediment risk in the Sea Level project area.

Figure Watershed-5
VCU 7570 Thorne Arm



Source: J. A. Llanos Ketchikan Ranger District GIS, 1997.

D Appendix

Watershed Number: E83A
Creek Name: Tyee
ADF&G Number: 101-43-10560
VCU 757: Thorne Arm
SRI value = 19; SRI rank = 38
PII value = 1; PII rank = 37

Watershed E83A covers approximately 2.5 square miles, has 13 acres of lake and pond habitat, and has a maximum elevation of 1500 feet above sea level. This third order watershed contains approximately 6.1 miles of stream channel. Sixty-four percent of the watershed is characterized as MMI class 3 or 4. Ninety-one percent of the stream channels in this watershed transport sediment while only 3 percent store sediment.

The ADF&G stream catalog shows pink salmon use this stream. Field surveys identified an impassable barrier approximately 200 yards above saltwater. The class I habitat below the barrier is moderate gradient (MC). Cutthroat were observed in the 0.8 mile of class II stream above the barrier.

Watershed E83A contains approximately 1.4 miles of existing road. Three percent of this watershed has been harvested in the last 30 years. Alternative 2 proposes to build 0.6 mile of road. No timber harvest is planned for this watershed. Watershed E83A has a Potential Impact Index value of 1, ranking this watershed 37th among the 53 watersheds ranked for sediment risk in the Sea Level project area.

Watershed Number: FA3A
Creek Name: Hoonah Creek
ADF&G Number: 101-43-10590
VCU 757: Thorne Arm
SRI value = 25; SRI rank = 34
PII value = 10; PII rank = 25

Watershed FA3A covers approximately 0.5 square mile, has no lake or pond habitat, and has a maximum elevation of 1000 feet above sea level. This 2nd order watershed contains approximately 1.3 miles of stream channel. Fifty-eight percent of the watershed is characterized as MMI class 3 or 4. Sixty-nine percent of the stream channels in this watershed transport sediment and 1 percent of the stream channels store sediment.

The ADF&G stream catalog shows pinks use this stream. Field surveys identified an impassable barrier located 0.9 mile above saltwater. Resident fish were found throughout class I habitat. All the class I habitat is moderate gradient mixed control habitat (MM) and the rest is low quality. There is 0.1 mile of low complexity, high gradient (HC) class II habitat.

Watershed FA3A contains 1.4 miles of existing road. Twenty-five percent of this watershed has been harvested in the last 30 years. Alternative 2 proposes to harvest 3 percent of the watershed. Watershed FA3A has a Potential Impact Index value of 10, ranking this watershed 25th among the 53 watersheds ranked for sediment risk in the Sea Level project area.

Watershed Number: FA4A
Creek Name: un-named
ADF&G Number: none
VCU 757: Thorne Arm
SRI value =17; SRI rank =42
PII value =11; PII rank = 25

Watershed FA4A covers approximately .8 square miles, has no lake or pond habitat, and has a maximum elevation of 1000 feet above sea level. This 2nd order watershed contains approximately 1.3 miles of stream channel. Fifty-six percent of the watershed is characterized as MMI class 3 or 4. Sixty-nine percent of the stream channels in this watershed transport sediment; five percent of the stream channels store sediment.

The stream system in watershed FA4A is not listed in the ADF&G catalog. The first 0.2 mile of stream above saltwater is class I habitat; all of the class I habitat is low complexity high gradient (HC) stream channel. There is approximately 0.9 mile of class II habitat.

Watershed FA4A contains 0.8 mile of existing road. Thirty percent of this watershed has been harvested in the last 30 years. Alternative 2 proposes to build 0.4 mile of road and harvest six percent of the watershed. Watershed FA4A has a Potential Impact Index value of 11, ranking this watershed 25th among the 53 watersheds ranked for sediment risk in the Sea Level project area.

Watershed Number: E85A
Creek Name: un-named
ADF&G Number: 101-43-10630
VCU 757: Thorne Arm
SRI value = 29; SRI rank =31
PII value = 9; PII rank 29

Watershed E85A covers approximately 4.6 square miles, has 13 acres of lake and pond habitat, and has a maximum elevation of 1600 feet above sea level. This 3rd order watershed contains approximately 8.1 miles of stream channel. Forty-seven percent of the watershed is characterized as MMI class 3 or 4. Sixty-one percent of the stream channels in this watershed transport sediment while 25 percent of the stream channels store sediment.

The ADF&G stream catalog shows coho and steelhead use this stream. Field surveys observed coho fry and identified an impassable barrier 1 mile upstream from saltwater. One mile of watershed E85A is class I habitat, 3 percent is high complexity floodplain habitat, 75 percent is moderate gradient habitat (MM), and 22 percent is low complexity. The database identifies 4.6 miles of stream as moderate gradient (MM) class II habitat.

Watershed E85A contains 0.6 mile of existing road. Nine percent of this watershed has been harvested in the last 30 years. Alternative 2 proposes to build 0.7 mile of road and harvest four percent of the watershed. Watershed E85A has a Potential Impact Index value of 9, ranking this watershed 29th among the 53 watersheds analyzed in the Sea Level project area.

D Appendix

Watershed Number: E68A
Creek Name: Eve Pt. or RA'
ADF&G Number: 101-43-10090
VCU: Thorne Arm
SRI value = 14; SRI rank =43
PII value = 3; PII rank 34

This 1.2 square mile watershed contains 3.7 miles of stream and no lake habitat. The ridge that forms the watershed boundary is located at approximately 2,000 feet elevation. The watershed is approximately 2 miles wide and 1.6 miles long. There are 388 acres with a high and very high mass movement potential rating.

In 1995, Forest Service Biologists completed a basin wide survey to quantify habitat, determine fish presence, and identify barriers. The survey identified a 15 meter waterfall 730 meters from salt water. Marginal resident fish habitat continues above this for another 500 meters before the channel becomes steep (15 percent) and is dominated by cascades and chutes. The crew ended the survey at approximately 1,230 meters upstream from salt water. ADF&G conducted aerial surveys on two different years. In 1973, 2,500 pink salmon were observed and in 1985, 200 pinks were observed.

There is no harvest or road construction in this watershed. None of the alternatives proposes to build road or harvest timber in this watershed. Watershed E68A has a Potential Impact Index value of 3, ranking this watershed 34th among the 53 watersheds analyzed in the Sea Level project area.

Watershed Number: EX8A
Creek Name: None
ADF&G Number: 101-43-10095
VCU 757:
SRI value =0; SRI rank =53
PII value =0; PII rank = 53

Watershed EX8A covers approximately 0.5 square mile, has no lake or pond habitat, and has a maximum elevation of 1100 feet above sea level. This 1st order watershed contains approximately 1.3 miles of stream channel. Over 90 percent of the watershed is characterized as MMI class 3 or 4. All of the stream channels in this watershed transport sediment.

The ADF&G stream catalog shows pinks use the lower-most 0.3 mile of stream. Field surveys found a 6-meter barrier 100 meters above saltwater. The gradient for the first 100 meters of stream channel is 17 percent and no fish were found using this habitat. The rest of the stream channel in this watershed is class III. All of the stream channel in this watershed belongs to the high gradient (HC) process group

Watershed EX8A contains no existing road. Three percent of the watershed has been harvested in the last 20 years. Alternative 2 proposes to build 0.1 miles of road and harvest 4 percent of the watershed. Watershed EX8A has a Potential Impact Index value of zero, which ranks this watershed as the lowest potential risk (along with numerous others) among the 53 watersheds ranked for sediment risk in the Sea Level project area.

Watershed Number: EX9A

Creek Name: Punk

ADF&G Number: 101-43-10100

VCU 757: Thorne Arm

Because watershed EZ9A is less than one-half square mile it rated zero for SRI and PII. Watershed EX9A covers approximately 0.2 square miles, has 2 acres of lake and pond habitat, and has a maximum elevation of 500 feet above sea level. This 1st order watershed contains approximately 1.2 miles of stream channel. Ninety-nine percent of the watershed is characterized as MMI class 3 or 4. All of the stream channels in this watershed transport sediment.

The stream system in watershed E81A is not listed in the ADF&G catalog. Field surveys identified 2 impassable barriers located immediately upstream from saltwater. No anadromous or resident fish habitat has been identified in this watershed.

Watershed EX9A contains no existing road. Timber harvest has not occurred in this watershed. Alternative 2 proposes to build 0.7 mile of road and harvest 11 percent of the watershed.

VCU 7552 Gokachin

The VCU contains three cataloged anadromous watersheds (see Figure Watershed-6). There is only one major watershed in this VCU, Sea Level/Gokachin Creeks. The confluence of Sea Level and Gokachin Creeks are within a small old growth reserve.

Watershed Name: Sea Level/Gokachin Creek

Watershed Number: E79A

ADF&G Number: 101-43-10410

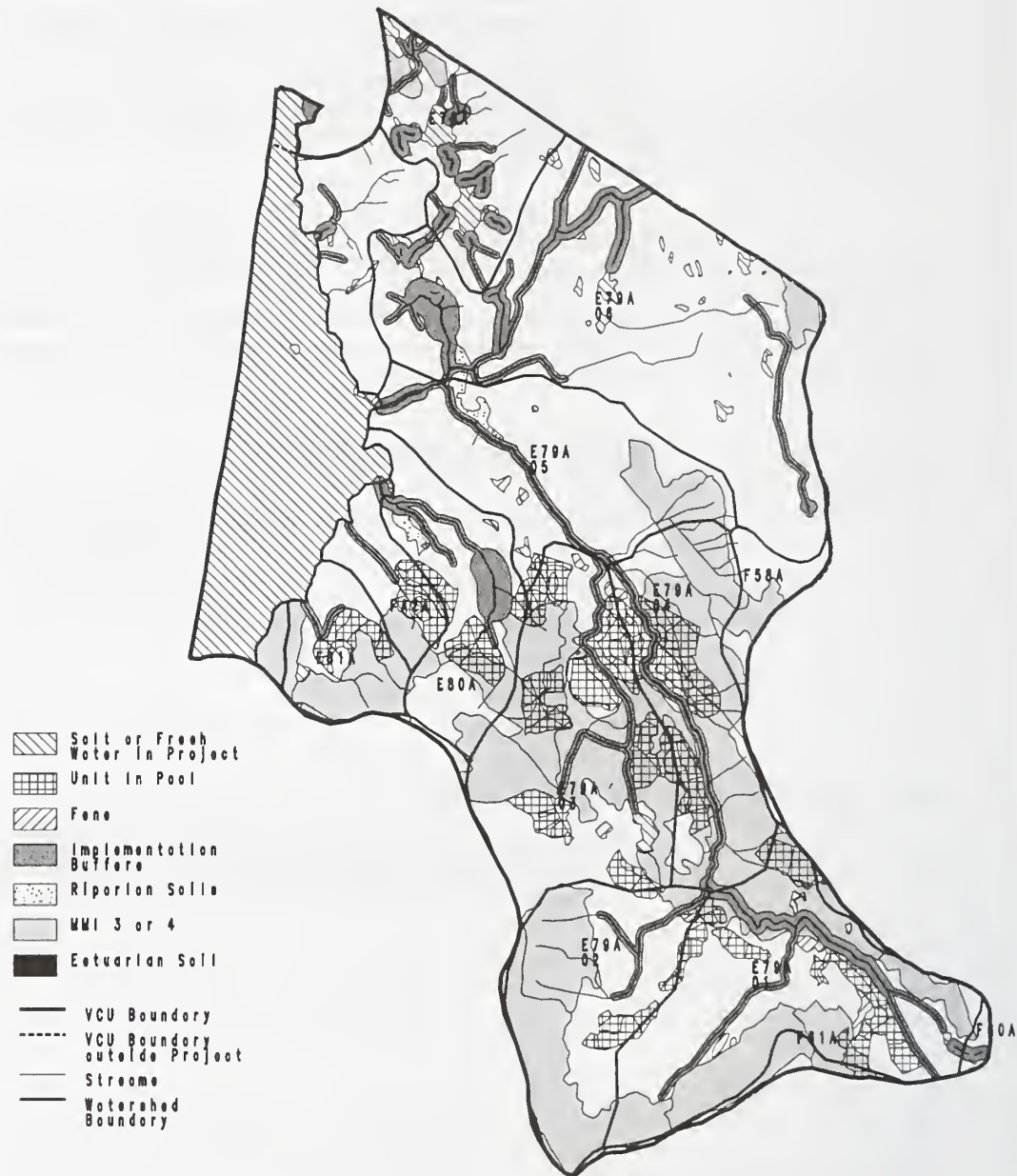
VCU: Gokachin

The SRI value = 18; SRI rank = 39

The PII value = 6; PII rank = 31

Sea Level Creek watershed covers approximately 20 square miles. Because of the sensitivity rating and complexity of this watershed a Tier II Watershed Level Analysis was required. That analysis is discussed later in this report (see Tier II SRA: Sea Level Creek E79A).

Figure Watershed-6
VCU 7552 Gokachin



Source: J. A. Llanos Ketchikan Ranger District, 1997

Watershed Number: E80A
Creek Name: Sherb
ADF&G Number: 101-43-10470
VCU 755: Gokachin
SRI value = 34; SRI rank =25
PII value =37; PII rank 10

Watershed E80A covers approximately 0.8 square mile, has 2 acres of lake and pond habitat, and has a maximum elevation of 300 feet above sea level. This 2nd order watershed contains approximately 2.7 miles of stream channel. Eighteen percent of the watershed is characterized as MMI class 3 or 4. Forty-three percent of the stream channels in this watershed transport sediment and 21 percent of the stream channels store sediment.

The ADF&G stream catalog shows pinks and coho use this stream. ADF&G Commercial Fish escapement observations reported over six years show a high count of 1,500 pinks in 1987 and the low of 350 in 1995. Field surveys observed pink and coho use. Approximately 1.4 miles of Sherb Creek is class I habitat. Of the class I habitat, 18 percent is high complexity floodplain habitat, 36 percent is moderate gradient habitat (MM), and the rest is low complexity. There is 1 mile of resident habitat.

Watershed E80A has no existing road. Timber harvest has not occurred in this watershed. Alternative 2 proposes to build 1.5 miles of road and harvest 8 percent of the watershed. Watershed E80A has a Potential Impact Index value of 37, ranking this watershed 10th among the 53 watersheds ranked for sediment risk in the Sea Level project area.

Watershed Number: FA2A
Creek Name: un-named
ADF&G Number: 101-43-10510
VCU 755: Gokachin

Because watershed FA2A is less than one-half square mile it rated zero for SRI and PII. Watershed FA2A covers approximately 0.3 square mile, has no lake or pond habitat, and has a maximum elevation of 400 feet above sea level. This 2nd order watershed contains approximately 1.4 miles of stream channel. Ten percent of the watershed is characterized as MMI class 3 or 4. Sixty-six percent of the stream channels in this watershed transport sediment.

The ADF&G stream catalog shows coho and pinks use this stream. GIS identifies approximately 0.3 mile of stream in this watershed as class I habitat. All class I habitat is moderate gradient (MM). There is approximately 0.3 mile of moderate gradient (MM) class II habitat.

Watershed FA2A contains no existing road. Timber harvest has not occurred in this watershed. Alternative 2 proposes to build 0.9 miles of road and harvest 18 percent of the watershed.

VCU 7590 Moth Bay and VCU 7542 Fish Creek

There is no proposed action in any of the watersheds within these two VCUs.

Painted Creek E76A—Tier II SRA

Watershed Number: E76A

Creek Name: Painted Creek

ADF&G Number: 101-45-10880

VCU: Gnat

The SRI value = 100; SRI rank = 1

The PII value = 75; PII rank = 2

The 4th order Painted Creek watershed ranks highest overall for Sediment Risk. This 10.9 square mile watershed contains six true sub-watersheds and two composite watersheds (Figure Watershed-7). Three sub-watershed at the headwaters contain all the lake habitat. Sub-watershed 01 contains 12.2 acres of lake, sub-watershed 02 contains 12.4 acres of lake, and sub-watershed three contains 36.2 acres of lake habitat. The outlet of the watershed has 273 acres of estuary habitat. This watershed contains almost 14 miles of depositional stream channel within 56 miles of stream network. A bedrock waterfall 15 feet high is located at the head of the estuary. Sub-watersheds 01, 02, 03, 08, and the eastern portion of 07 have valley bottoms at 500 foot elevation and surrounding hilltops peaking at 1,500 foot elevations. Sub-watersheds 04, 05, 06, and part of 07 range in elevation from 100 feet to less than 500 feet. Volcanic cinder and sediment is prominent throughout the watershed.

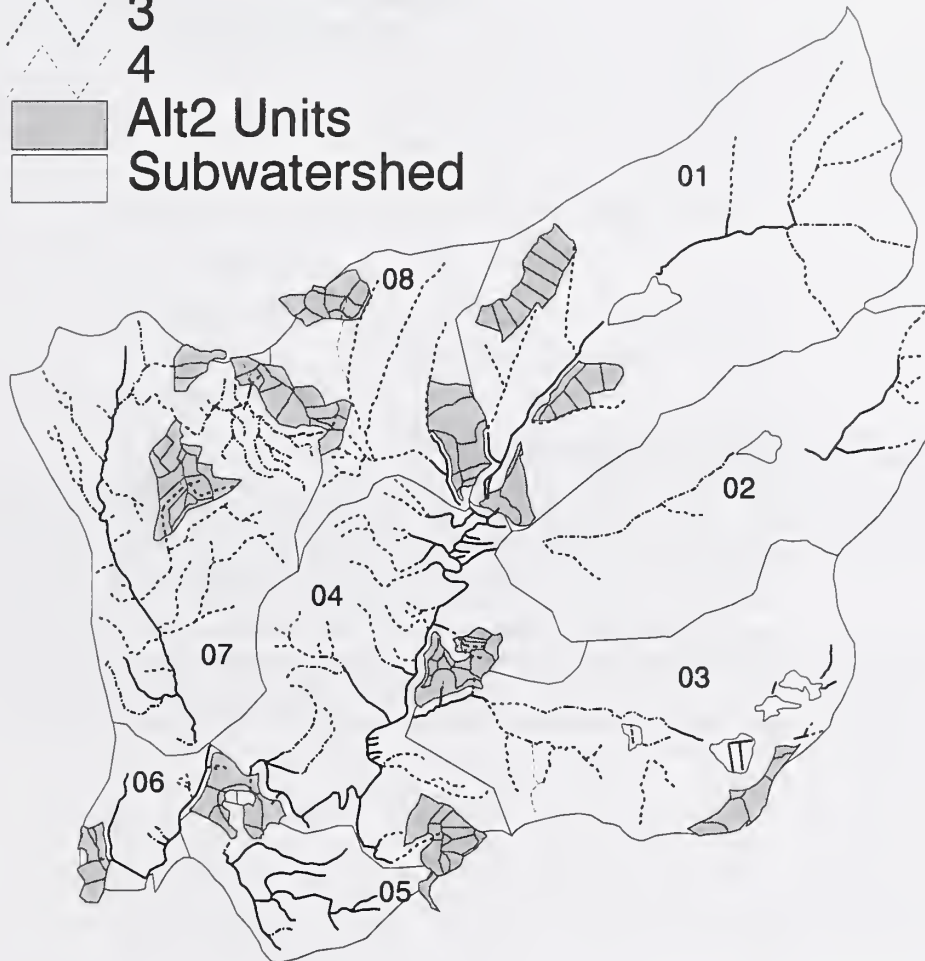
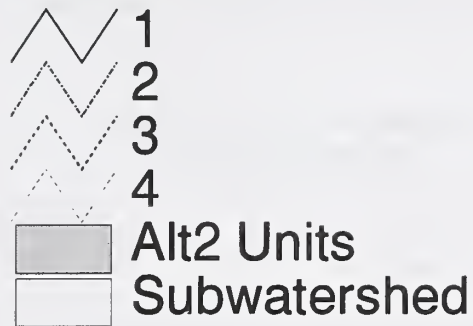
In 1996, the Forest Service conducted basin wide surveys to quantify habitat, determine fish presence, and identify barriers. Coho and steelhead are the only anadromous fish able to migrate over the falls at the outlet. The survey identified anadromous fish habitat for 7,200 meters (approximately 4.5 miles) on the main stem and 2 miles of tributary habitat. In 1986 LWD and boulders were placed in the main stem of Painted Creek to increase habitat complexity. In 1997, Forest Service biologists identified road sediment contribution concerns. The survey identified fish passage problems such as perched culverts and slumping road prisms near the stream. There are approximately 18 miles of class I habitat. Of that, 70 percent is high quality floodplain habitat, 20 percent is fair quality moderate gradient habitat (MM), and the rest is low quality.

In 1997, the Forestry Sciences Laboratory selected Painted Creek to quantify effects of forest land use on stream channel conditions. Assessment of channel and habitat conditions is required to evaluate the effectiveness of fish and riparian standards and guidelines. This research will quantify salmonid species density, species distribution, and size distribution within the study stream reaches. The biological component of this study provides a link between the physical measurements, habitat complexity, and the complex response of salmonid populations. This effort is expected to continue through the year 2001.

In the last 30 years there have been approximately 1,412 acres of timber harvested and approximately 10.6 miles of road constructed in the Painted Creek watershed. The road currently has fish stream crossings identified as needing repair to provide passage. Painted Creek has a Potential Impact Index value of 69, ranking this watershed 6th among the 53 watersheds ranked for sediment risk in the Sea Level project area.

Figure Watershed-7
Painted Creek Watershed and Sub-watersheds

Streams



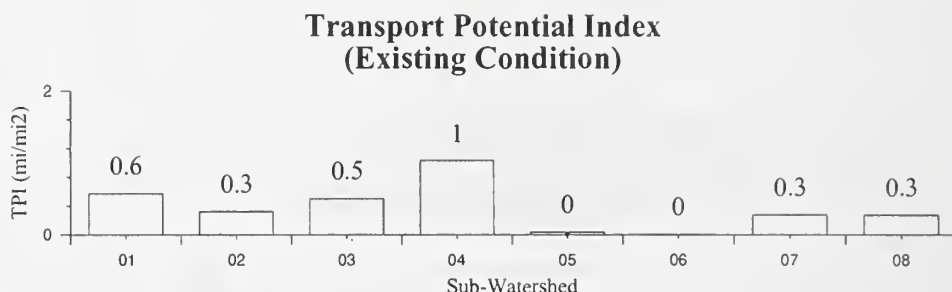
Source: Ketchikan Ranger District GIS. R. G. Sainz 1997.

Sediment Transport Areas

The existing Sediment Transport Index (STI) for each sub-watershed is shown in Figure Watershed-8. Sub-watershed 04 has the highest scores followed by sub-watershed 01. These sub-watersheds have the greatest potential to transport sediment downstream in large, rapid, pulses relative to other sub-watersheds. Sub-watershed 03 also has a relatively high score. Sub-watershed 04 also happens to have the highest Sediment Deposition Index (SDI), see Figure Watershed-9. The reason for this anomaly is that this is a composite watershed with

some very steep and unstable ground located within the same boundary as the depositional reaches. The steepest side of Painted Peak volcano is located in this composite watershed.

Figure Watershed-8
Sediment Transport Index for Painted Creek Sub-watersheds

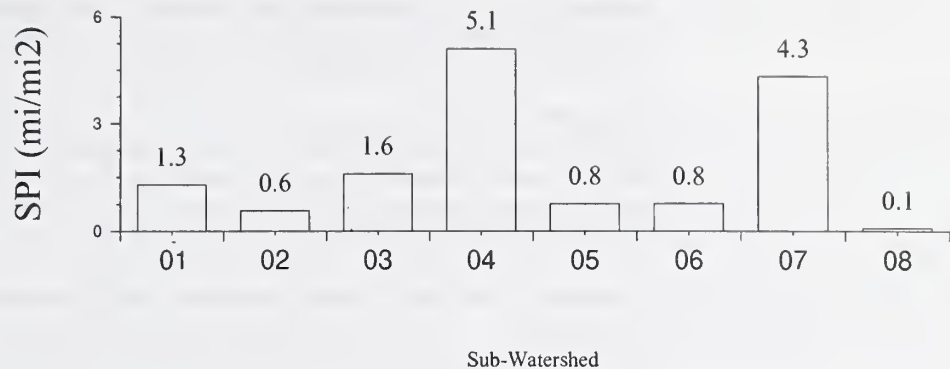


Source: R. Sainz Ketchikan Ranger District 1997.

Sediment Depositional Areas

The existing Sediment Deposition Index (SDI) for each sub-watershed is shown in Figure Watershed-9. Sub-watersheds 04 and 07 have the highest scores, indicating the highest density of low-gradient depositional channels. Sediment transported from upstream areas will be deposited in these streams for medium-to-long term storage. Sub-watersheds 04 and 06 are composite watersheds. Composite watersheds typically contain depositional areas. In this case the composite watersheds are also the mainstem of Painted Creek where prime floodplain habitat is located. SDI score for sub-watersheds 01 and 03 are greater than one, reflecting streams associated with lakes. Sub-watersheds 01 and 03 also have relatively high STI scores because of their position at the headwaters of the watershed.

Figure Watershed-9
Sediment Deposition Index for Painted Creek Sub-watersheds



Source: Sainz Ketchikan Ranger District, 1997.

Discussion

The sediment analysis can be used to identify important hydrologic and geomorphic processes at the watershed level. Sub-watersheds 01, 02, 03, and 08 all have potential to contribute more sediment to the mainstem of Painted Creek which mostly sets in sub-watershed 04; center of the watershed. Sub-watershed 04, a composite watershed, contains large, low gradient, depositional channels with multiple bars, side channels and accumulations of sediment and large woody debris (LWD).

The vegetation in the Riparian Management Area (RMA) below the lake in sub-watershed 01 is mostly alder. The channel is moderate gradient contained. Alder vegetation coupled with the large amounts of LWD and large amounts of sand size particles at the bottom of this creek suggest this sub-watershed has a high potential for moving large material downstream. This sub-watershed has the highest discharge, 510 cubic feet per second (cfs), of the sub-watersheds in E76A. The lake in sub-watershed 01 probably stores LWD and sediment from the surrounding hillsides to create a "dam" at the outlet. When this debris at the outlet finally breaks free it takes everything in its path which finally ends up in the composite watershed 04. Sub-watershed 02 juxtaposed to the south has the next highest discharge of 338 cfs. Sub-watershed 08, juxtaposed to the east of sub-watershed 01 has a discharge of 181 cfs. The habitat complexity increases at the confluence of these three sub-watersheds. The BWS in 1996 identified the most side channels, gravel bars, natural disturbances, and beaver ponds in this section of the watershed.

The composite watershed 04 has the third highest discharge rate of 354 cfs. Because sub-watersheds 01, 02, 03, and 08 all contribute to this discharge and stream network it also has the highest drainage efficiency.

Composite watershed 04 is a critical sub-watershed in terms of fisheries and hydrology. From the fisheries standpoint, composite watershed 04 contains over 5 kilometers (3.1 miles) of coho, steelhead, and resident fish habitat. From a hydrological standpoint composite watershed 04 contains the most depositional channel where debris can accumulate. The STI shows composite watershed 04 as the highest for sediment transport. This is because of the high density of transport streams coming from the south and east sides of Painted Peak.

Alternative Development

Stream surveys were the primary tool used in this watershed analysis. Because of its capability to factor many physical features, the Sediment Risk Assessment model helped identify critical areas of the watershed. Harvest unit recommendations for protection of fish and water resources is located on each unit card. Three harvest units totaling 144 acres were removed from the unit pool in this watershed for an experimental timber sale (Brand X). The 144 acres includes acres of deferred timber harvest.

Concurrent Harvest

Harvest from the Brand X Timber sale may occur concurrently with timber harvest in the Painted Creek watershed. The selected alternative for that timber sale emphasizes individual tree selection, group selection, patch cuts and clear-cuts with reserve trees to gather ground condition information important for implementation of Forest standards and guidelines. Less than 1 mile of temporary road and less than one-tenth mile of specified road would be built. In addition, a half-mile of road reconstruction would be required.

Approximately 2.1 MMBF will be harvested on 84 acres with 28 acres prescribed for clear-cut with reserve trees, 44 acres prescribed for individual tree selection and 7 acres prescribed for patch cuts and 5 acres group selection. See discussion of sub-watersheds 01, 03, and 05.

Sub-watersheds 01 and 08

Analysis indicates that building new roads to cable log proposed harvest units 65, 66, 75, and 76 in sub-watersheds 01 and 08 could adversely affect fish habitat in composite watershed 04. The slopes in sub-watershed 01 are relatively steep. Additionally 80 percent of this sub-watershed is categorized as MMI 3 or 4 soils. Recommendations are to eliminate new road construction to access these units and helicopter log these units.

Field review of unit 71 in sub-watershed 08 identified no significant sediment sources to downstream habitat. Unit 71 is over one mile away from any fish habitat. Additionally the unit is already accessible by existing road.

Sub-watershed 03

Unit 58 was removed from the unit pool as part of the Brand X timber sale. Unit 58 is a 48-acre experimental harvest unit that incorporates individual tree marking. The unit is located in sub watershed 3. The harvest unit contains two water quality streams that drain into and through muskegs within the unit and to the north. The muskegs serve as sinks for any sediment transported as a result of logging. No new road will have to be constructed in this sub-watershed. A portion of unit 60 is within this sub-watershed. Unit 60 is surrounded on three sides (north, west, and east) by fish habitat. Fish habitat on the south consists of beaver ponds, flood plain channel, and some high gradient contained (12 percent) high quality rearing habitat. Unit design includes buffers on fish streams.

Sub-watershed 04

Sub-watershed 04 contains portions of three harvest units located along the existing road system. Some new road will have to be constructed to log the timber in these units. Unit 57 located on the south east of this sub-watershed and continues into watershed E75A. Fish habitat is far enough away that effects from sediment in this unit to fish habitat is negligible. A small portion of unit 5 is located in this sub-watershed. This section of the unit contains high quality refuge tributary habitat near the mainstem of Painted Creek. As the harvest unit is relatively flat, sedimentation is not an issue in this unit. However implementing buffers on all the fish streams in this unit would virtually eliminate 80 percent or more of the acreage in this unit. A portion of unit 60 is located in this sub-watershed. The unit design includes buffers on the all of the streams in this unit.

Sub-watershed 05 and 06

Portions of unit 5 are located in these sub-watersheds. The harvest unit is relatively flat so sedimentation would not be an issue in this unit. However implementing buffers on all the fish streams in this unit would virtually eliminate 80 percent or more of the acreage in this unit. A small portion of unit 6, from Brand X Timber Sale is within this sub-watershed. Approximately two acres fall within the Painted Creek watershed

Sub-watershed 07

The harvest units in this sub-watershed are located on ridges that surround a muskeg plateau. The muskeg plateau does not contain fish habitat as this landscape experiences seasonal extreme water temperatures and the area contains only marginal rearing habitat. The dissolved oxygen content in muskeg channels is usually low. Streams within unit 67 drain into this muskeg plateau. Unit 68 contains a rill that is located on low vulnerability karst and is over a half mile from any fish habitat. Unit 69 contains some class III streams with steep gradients (30 percent) and incision of 15 feet located on the east portion of the unit. The stream then loses gradient and flows into a low energy class III stream. None of the units in this sub-watershed are expected to adversely affect fish habitat or water quality.

Sub-watershed 08

Existing Road Condition

Erosion is occurring at two points along the road (8440100) in this sub basin. Road drainage is not functioning correctly near the western edge of this sub basin causing the road surface to deteriorate. Mass wasting of road 8440100 is occurring approximately 200 feet from the end of road 8440100. Road drainage deficiencies will be corrected and seeding will occur on exposed soils.

Sea Level Creek E97A

Watershed Name: Sea Level/Gokachin Creek

Watershed Number: E79A

ADF&G Number: 101-43-10410

VCU: Gokachin

The SRI value = 34

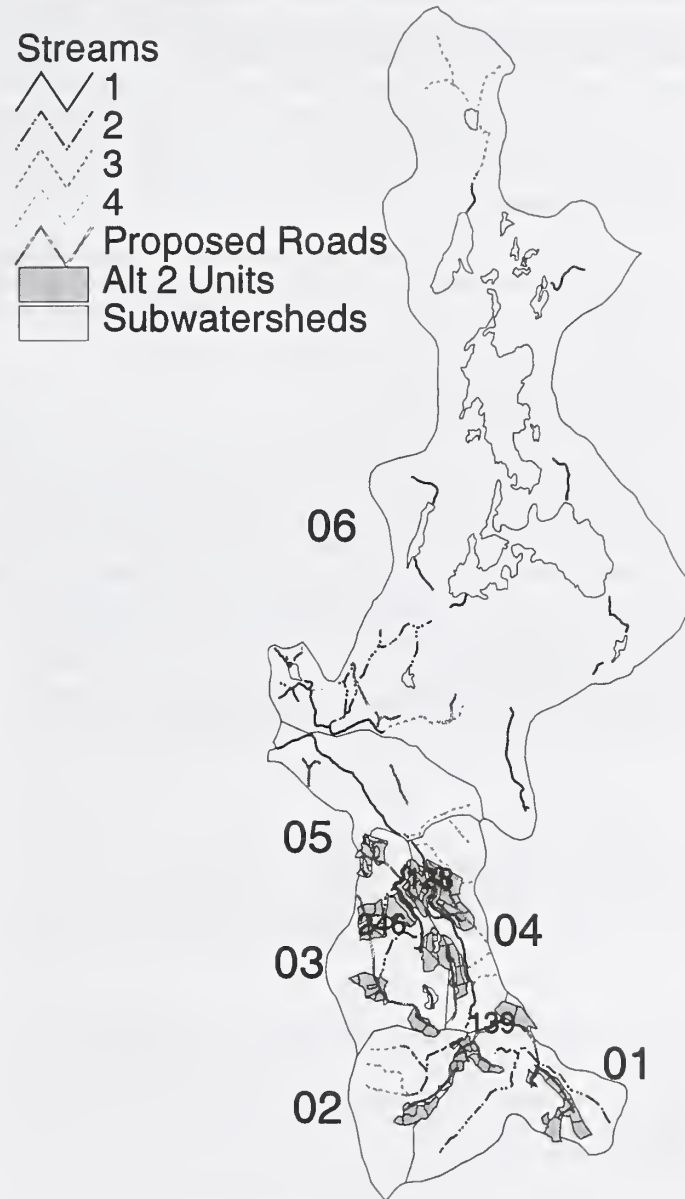
The PII value =

The Sea Level/Gokachin watershed covers approximately 20 square miles, only about half of that is in the Project Area. The watershed contains the most lake habitat in the Project Area, over 1,140 acres. The watershed is comprised of four true sub-watersheds and two composite watersheds (Figure Watershed-10). The confluence of Gokachin and Sea Level Creeks, located in composite watershed 05, sets approximately 595 meters (1,952 feet) upstream from saltwater.

Composite watershed 04 contains what is considered as the mainstem of Sea Level Creek. Sub watersheds 01, 02 and 03 form three different headwater sub-watersheds for the Sea Level Creek watershed. Sub-watershed 04 is the first composite watershed that collects water and other material transported from sub-watersheds 01, 02, and 03. The Sub-watershed 06 contains what is considered the Gokachin watershed. Composite watershed 05 collects water from Gokachin and Sea Level Creeks.

Upstream of composite sub-watershed 04 in Sea Level Creek, short ridges, 200 feet in elevation, separate the Sea Level sub-watersheds into three true sub-watersheds. A ridge with a elevation peak at 1,500 feet forms the eastern boundary of the Sea Level watershed. The peaks and ridges that surround the Gokachin watershed range in elevation from 200 to 2,000 feet. Approximately 0.6 miles upstream from salt water a 15 meter vertical bedrock waterfall prevents upstream migration of anadromous fish to the Gokachin sub-watershed. In the lower part of the watershed, Sea Level Creek is deeply incised. In the upper watershed, the creek is typically a lower gradient, moderately contained channel. Several small tributary streams enter Sea Level Creek, composite sub-watershed 04. The Sea Level Creek drainage contains a number of small, unnamed lakes, mostly on the west side of the valley, sub-watershed 03.

Figure Watershed-10
Sea Level/Gokachin Watershed and Sub-watersheds



Source: Ketchikan Ranger District GIS. R. G. Sainz, 1997.

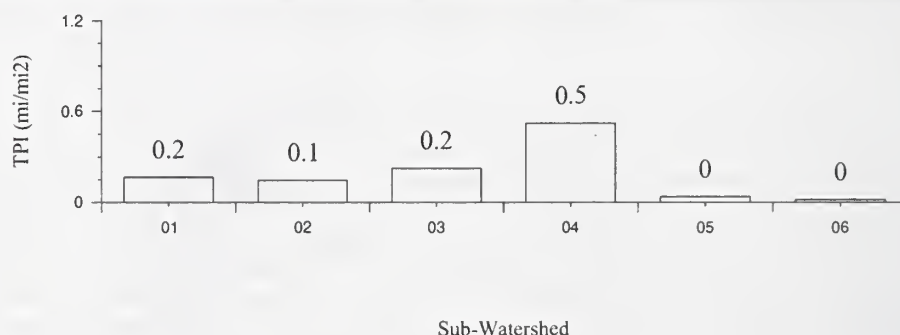
In 1995 the USFS conducted basin wide surveys in this watershed to quantify habitat, determine fish presence, and identify barriers. Approximately 2,000 meters upstream from the confluence, Sea Level Creek a 7-meter bedrock waterfall prevents upstream migration of anadromous fish. The ADF&G conducted a habitat survey in 1973 on Gokachin Creek though not Sea Level Creek. They identified the system as a good producer for pink and chum salmon. The watershed supports anadromous runs of steelhead trout and Dolly Varden, coho, chum, and pink salmon, as well as resident trout and Dolly Varden above the migration barriers. ADF&G has conducted aerial surveys of pink and coho salmon in outlet basin. The average annual number of pinks over 29 years of data is approximately 2,700. This stream was surveyed more than once per year and included a foot survey in 1985 that estimated 10,080 pink salmon.

Within the last 30 years a small portion of the watershed was harvested using "A-frame" beach logging methods. There has been no recorded road construction in this watershed. Because of the size of watershed, amount of fish production, and pristine characteristics of the watershed a more detailed analysis will be conducted.

Sediment Transport Areas

The existing Sediment Transport Index (STI) for each sub-watershed is shown in Figure Watershed-11. Sub-watershed 04 has a relatively high score compared to the other sub-watersheds in E79A. This sub-watershed has the greatest potential to transport sediment downstream in large, rapid, pulses relative to other sub-watersheds. Sub-watershed 01 and 03 have some ability to transport sediment but not very effectively. The sub-watersheds with low scores are depositional areas of the Gokachin/Sea Level watershed (Figure Watershed-12). The scores are relative comparisons of the sub-watersheds within E79A.

Figure Watershed-11
Sediment Transport Index Sea Level Sub-watersheds



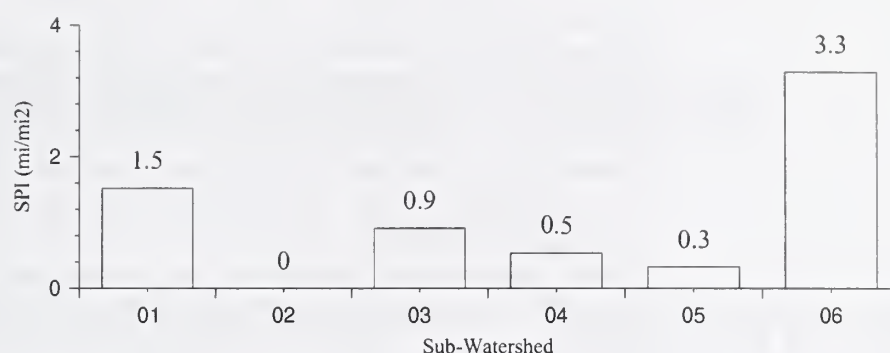
Source: Sainz 1997.

Sediment Deposition Areas

The existing Sediment Deposition Index (SDI) for each sub-watershed is shown in Figure Watershed-12. The depositional areas contain the primary channel types where sediment transported from upstream will be deposited for medium to long-term storage. Gokachin sub-watershed 06 scores highest relative to other sub-watersheds in E79A followed by sub-watershed 01 located on the southeast end of E79A. Sub-watershed 06 contains 1,140 acres of lake habitat with only 45 acres of that in the Project Area boundary. Because no management is proposed in the Gokachin sub-watershed, the risk of sediment overload is

negligible. Sub-watershed 01 becomes the high score of concern compared to the other sub-watersheds where management is proposed.

Figure Watershed-12
Sediment Depositional Index for Sea Level Creek Sub-watersheds



Source: Sainz 1997.

Sub-watershed 01 contains the highest depositional stream channel in watershed E79A. The discharge of 441 cfs rates highest behind the Gokachin sub-watershed which is almost double that discharge at 738 cfs. Sub-watersheds 02 and 03 have high discharges 281 cfs and 414 cfs. The watershed steepness varies for the sub-watersheds. Slopes less than 55 percent dominate the overall topography with 4,249 acres of slopes being less than 55 percent gradient. Sub-watershed 04 contains the most acres of slopes between 55 and 75 percent gradient, 663 acres. Sub-watershed 03 contains the most slopes greater than 75 percent gradient, 337.

Timber harvest or road construction on areas with MMI 3 and 4 soils on slopes greater than 75 percent gradient increase risk of introducing too much sediment into the system. Seventy-five percent (528 acres) of sub-watershed 04 has MMI 3 or 4 soils. Sixty-three percent of the slopes are greater than 55 percent (226 acres 55-75 percent and 207 acres exceed 75 percent).

Discussion

Sub-watershed 05 is the composite watershed that serves as the outlet sub-watershed for both Gokachin sub-watershed 06 and Sea Level sub-watersheds 01-04. Composite sub-watershed 05 TPI and SDI scores may be a misrepresentations of what is actually on the ground. The channel type for sub-watershed 05 is identified as flood plain which has characteristics of a depositional channel. BWS identified that the channel has mixed control but is not contained and the gradient is less than 2 percent. There is currently no channel type description that fits these criteria.

Data limitations

Stream data is updated only after streams have been field verified. Unmapped streams are likely to be small streams in the following channel types, HC1, HC2, HC3, MC2, and MC3. Of these, perhaps 25-45 percent may contain fish. This is based on field reconnaissance especially in sub-watersheds 03 and lower reaches of sub-watersheds 01 and 02.

Alternative Development

Stream surveys were the primary tool used in this watershed analysis. Because of its capability to factor many physical features, the Sediment Risk Assessment model helped identify critical areas of the watershed. Harvest unit recommendations for protection of fish and water resources is located on each unit card. Sub-watersheds 01 and 04 are critical sub-watersheds.

Sub-watersheds 01 and 04

If sub-watershed 01 is entered to access units 139 and 140, recommendations are to cross Sea Level Creek as few times as possible, by bridge, at the headwaters of sub-watershed 04. If possible, place switch back on that road to head north on the east side of the mainstem of Sea Level Creek, sub-watershed 04, to access unit 128. Recommendations would also be to maintain a 300-foot buffer on Sea Level Creek. This would minimize potential risk to fish and water resources.

Sub-watersheds 01 and 02

Sub-watershed 01 contains units 136, 137, 139, 140 and part of unit 138. Recommendations are to limit road crossings in the headwaters of E79A, sub-watersheds 01 and 02.

Sub-watersheds 03

Field reconnaissance conducted in units in this sub-watershed identified high quality fish habitat. The topography is relatively flat with 660 acres of slopes less than 75 percent and 207 acres of slopes greater than 75 percent. This watershed ranks second for amount of MMI 3 or 4 soils (512 acres or 50 percent of sub-watershed area). Site-specific modifications of RMA prescriptions based on site-level analysis information are possible here. All units except 133 and 134 are likely to contain some fish habitat either in, or adjacent to, the unit.

Sub-watershed 05

This sub-watershed is very flat with only 39 acres of slopes greater than 75 percent. This sub-watershed contains the bulk of the high quality flood plain fish habitat in watershed E79A. Recommendations are to stay out of this sub-watershed as planned. Material transported from the headwater sub-watersheds will be deposited here thus increasing the habitat complexity.

Sub-watershed 06

There is no management activity planned in this sub-watershed. Recommendations are to stay out of this sub-watershed as planned.

Condition of Existing Roads

There are approximately 321 miles of National Forest System roads on Revilla Island; 158 miles of those are located within the Project Area. In 1997, District Fish Biologists surveyed some of the existing roads in the Project Area to address fisheries concerns. The data from that survey is located in Appendix E. A summary can also be found in Chapter 3 Roads Section. Additional road surveys are currently in progress. New information will be incorporated into the project as it is completed.

Appendix E

Road Maintenance Levels

Traffic Service Levels

Road Management Objectives

Road Condition Survey Data

Appendix B

Table B.1. Summary of the
data used in the study.

The data were collected from
the following sources:

Road Maintenance Levels

Maintenance levels define the level of service provided by, and maintenance required for, a specific road. Maintenance levels must be consistent with road management objectives and maintenance criteria.

Factors

Consider the following factors when selecting maintenance levels:

- a. Resource program needs, environmental and resource protection requirements, visual quality objectives, and recreation opportunity spectrum classes,
- b. Road investment protection requirements,
- c. Service life and current operational status,
- d. User safety,
- e. Volume, type, class, and composition of traffic,
- f. Surface type,
- g. Travel speed,
- h. User comfort and convenience,
- i. Functional classification, and
- j. Traffic service level.

Roads may be currently maintained at one level and planned to be maintained at a different level at some future date. The operational maintenance level is the maintenance level currently assigned to a road considering today's needs, road condition, budget constraints, and environmental concerns; in other words, it defines the level to which the road is currently being maintained. The objective maintenance level is the maintenance level to be assigned at a future date considering future road management objectives, traffic needs, budget constraints, and environmental concerns. The objective maintenance level may be the same as, or higher or lower than, the operational maintenance level. The transition from operational maintenance level to objective maintenance level may depend on reconstruction or disinvestment.

Maintenance levels 1 through 5 (operational and objective) are described in the following paragraphs.

Roads assigned to maintenance levels 2-5 are either constant service roads or intermittent service roads during the time they are open to traffic. See exhibit 01 for the relationship between maintenance levels.

Level 1—Assigned to intermittent service roads during the time they are closed to vehicular traffic. The closure period must exceed 1 year. Basic custodial maintenance is performed to keep damage to adjacent resources to an acceptable level and to perpetuate the road to facilitate future management activities. Emphasis is normally given to maintaining drainage facilities and runoff patterns. Planned road deterioration may occur at this level. Appropriate traffic management strategies are "prohibit" and "eliminate."

Roads receiving level 1 maintenance may be of any type, class, or construction standard, and may be managed at any other maintenance level during the time they are

Maintenance Level Descriptions

E Appendix

open for traffic. However, while being maintained at level 1, they are closed to vehicular traffic, but may be open and suitable for nonmotorized uses.

Level 2—Assigned to roads open for use by high clearance vehicles. Passenger car traffic is not a consideration. Traffic is normally minor, usually consisting of one or a combination of administrative, permitted, dispersed recreation, or other specialized uses. Log haul may occur at this level. Appropriate traffic management strategies are either to (1) discourage or prohibit passenger cars or (2) accept or discourage high clearance vehicles.

Level 3—Assigned to roads open and maintained for travel by a prudent driver in a standard passenger car. User comfort and convenience are not considered priorities.

Roads in this maintenance level are typically low speed, single lane with turnouts and spot surfacing. Some roads may be fully surfaced with either native or processed material. Appropriate traffic management strategies are either "encourage" or "accept." "Discourage" or "prohibit" strategies may be employed for certain classes of vehicles or users.

Level 4—Assigned to roads that provide a moderate degree of user comfort and convenience at moderate travel speeds. Most roads are double lane and aggregate surfaced. However, some roads may be single lane. Some roads may be paved and/or dust abated. The most appropriate traffic management strategy is "encourage." However, the "prohibit" strategy may apply to specific classes of vehicles or users at certain times.

Level 5—Assigned to roads that provide a high degree of user comfort and convenience. These roads are normally double lane, paved facilities. Some may be aggregate surfaced and dust abated. The appropriate traffic management strategy is "encourage."

Traffic Service Levels

Traffic service levels (TSL) describe a road's significant traffic characteristics and operating conditions. The levels reflect a number of factors, such as speed, travel time, traffic interruptions, freedom to maneuver, safety, driver comfort, convenience, and operating cost. These factors, in turn, affect design elements, such as:

- a. Number of lanes,
- b. Turnout spacing,
- c. Lane widths,
- d. Type of driving surface,
- e. Sight distances,
- f. Design speed,
- g. Clearance,
- h. Horizontal and vertical alignment,
- i. Curve widening and
- j. Turnarounds.

The following table contains descriptions of the four different levels of traffic service for Forest roads.

	I	II	III	IV
Flow	free flowing with adequate passing facilities	Congested during heavy traffic such as peak logging or recreationactivities	Interrupted by limited passing facilities, or slowed by the road condition	Flow is slow or may be blocked by an activity. Two way traffic is difficult and may require backing to pass.
Volume	uncontrolled will accommodate the expected traffic volumes	Occasionally controlled during heavy use periods	Erratic; frequently controlled as the capacity is reached	Intermittent and usually controlled. Volume is limited to that associated with the single purpose.
Vehicle Types	Mixed;includes the critical vehicle and all vehicles normally found on public roads	Mixed; includes the critical vehicle and all vehicles normally found on public roads	Controlled mix; accommodates all vehicle types including the critical vehicle. Some use may be controlled to minimize conflicts between vehicle types	Single use; not designed for mixed traffic. Some vehicles may not be able to negotiate Concurrent use between commercial and other traffic is restricted.

E Appendix

Critical Vehicle	Clearances are adequate to allow free travel. Overload permits are required	Traffic controls needed where clearances are marginal. Overload permits required	Special provisions may be needed. Some vehicles will have difficulty negotiating some segments	Some vehicles may not be able to negotiate. Loads may have to be off-loaded and walked into
Safety	Safety features are part of the design	High priority in design. Some protection is accomplished by traffic management	Most protection is provided by traffic management	The need for protection is minimized by low speed and strict traffic control
Traffic Management	Normally limited to regulatory, warning, and guide signs and permits	Employed to reduce traffic volume and conflicts	Traffic controls are frequently needed during periods of high use by the dominant resource activity	Used to discourage or prohibit traffic other than that associated with the single purpose
User Cost	Minimize; transportation efficiency is important	Generally higher than "A" because of slower speeds and increased delays	Not important; efficiency of travel may be traded for lower construction costs	Not considered
Alignment	Design speed is predominant factor within feasible topographic limitations	Influenced more strongly by topography than by speed and efficiency	Generally dictated by topographic features and environmental factors. Design speeds are generally low	Dictated by topography, environmental factors, and the design and critical vehicle limitations. Speed is not important.
Road Surface	Stable and smooth with little or no dust, considering the normal season of use	Stable for the predominant traffic for the normal use season. Periodic dust control for heavy use or environmental reasons. Smoothness is commensurate with the design speed	May not be stable under all traffic or weather conditions during normal use season. Surface rutting, roughness, and dust may be present but controlled for environmental or investment protection	Rough and irregular. Travel with low clearance vehicles is difficult. Stable during dry conditions. Rutting and dusting controlled only for soil and water protection

Road Management Objectives

Road Number	Length (miles)	Existing/Proposed	Post Sale Maintenance Level	Road Management Objective	Closure Method	AFRPR Closure Status	Remarks
8300000	8.65	existing	2	accept		active	Shelter Cove
8300250	0.30	existing	1	eliminate	barrier	closed	
8300260	0.35	existing	1	eliminate	barrier	closed	
8300261	0.11	existing	1	eliminate	barrier	closed	
8300300	1.60	existing	1	eliminate	barrier	inactive	
8300340	1.20	existing	1	eliminate	barrier	closed	
8300350	0.20	proposed	1	eliminate	barrier	closed	
8300360	0.45	existing	1	eliminate	barrier	closed	
8330000	4.86	existing	1	prohibit	gate	inactive	Road to Coon Cove gate at 0.00
8330020	0.60	existing	1	eliminate	barrier	inactive	
8330400	0.66	existing	1	eliminate	barrier	inactive	
8333000	0.20	existing	1	eliminate	barrier	inactive	
8333100	0.69	existing	1	eliminate	barrier	inactive	
8333200	0.69	existing	1	eliminate	barrier	inactive	
8337000	3.52	existing	1	eliminate	barrier	inactive	
8337100	0.88	existing	1	eliminate	barrier	inactive	
8337500	0.67	existing	1	eliminate	barrier	inactive	
8337600	1.31	existing	1	eliminate	barrier	inactive	
8337650	0.29	existing	1	eliminate	barrier	inactive	
8340000	12.4	existing	2	accept		active	
8340100	0.54	existing	2	accept		active	LTF—Shelter Cove
8340106	0.98	existing	2	accept		active	LTF—Shelter Cove
8340160	1.80	both	1	eliminate	barrier	inactive	0.9 existing, 0.9 proposed
8340162	1.60	proposed	1	eliminate	barrier	closed	
8340166	0.70	proposed	1	eliminate	barrier	closed	
8340167	0.20	proposed	1	eliminate	barrier	closed	
8340200	2.30	both	1	eliminate	barrier	inactive	1.0 existing, 1.3 proposed
8340230	1.50	proposed	1	eliminate	barrier	inactive	
8340232	0.50	proposed	1	eliminate	barrier	closed	
8340400	2.00	both	1	eliminate	barrier	inactive	1.2 existing, 0.8 proposed
8340600	0.50	proposed	1	eliminate	barrier	closed	

E Appendix

Road Number	Length (miles)	Existing/ Proposed	Post Sale Maintenance Level	Road Management Objective	Closure Method	AFRPR Closure Status	Remarks
8340620	0.30	proposed	1	eliminate	barrier	closed	
8340700	2.00	both	1	eliminate	barrier	inactive	
8340800	1.00	proposed	1	eliminate	barrier	closed	
8340900	2.50	both	1	eliminate	barrier	inactive	0.8 existing, 1.7 proposed
8340910	0.30	proposed	1	eliminate	barrier	closed	
8340950	0.50	proposed	1	eliminate	barrier	closed	
8340953	0.50	proposed	1	eliminate	barrier	closed	
8347000	0.77	existing	1	eliminate	barrier	inactive	
8400000	10.3	both	2	accept		active	4.9 existing Elf Point mainline
8400000	14.2	existing	2	accept		active	Shoal Cove Sec.
8400140	0.50	existing	2	accept		active	LTF—Elf Point
8400150	2.10	existing	2	eliminate	barrier	inactive	
8400180	0.30	proposed	1	eliminate	barrier	closed	
8400270	0.25	proposed	1	eliminate	barrier	closed	
8400280	1.06	existing	1	eliminate	barrier	closed	
8400281	0.60	proposed	1	eliminate	barrier	closed	
8400300	0.75	both	1	eliminate	barrier	closed	
8400301	0.40	proposed	1	eliminate	barrier	closed	
8400302	0.50	proposed	1	eliminate	barrier	closed	
8400315	0.60	proposed	1	eliminate	barrier	closed	
8400340	0.80	both	1	eliminate	barrier	closed	0.2 existing, 0.6 proposed
8400342	0.40	proposed	1	eliminate	barrier	closed	
8400350	0.75	existing	1	accept		active	access to cg
8400360	0.66	existing	1	eliminate	barrier	inactive	
8400420	1.30	existing	1	accept		active	LTF access
8400425	0.70	proposed	1	eliminate	barrier	closed	
8400431	1.04	existing	1	eliminate	barrier	closed	
8400440	1.77	existing	1	eliminate	gate	inactive	
8400443	0.67	existing	1	eliminate	barrier	closed	
8400444	0.86	existing	1	eliminate	barrier	closed	
8400450	2.29	existing	1	eliminate	barrier	closed	

Appendix E

Road Number	Length (miles)	Existing/Proposed	Post Sale Maintenance Level	Road Management Objective	Closure Method	AFRPR Closure Status	Remarks
8400452	0.82	existing	1	eliminate	barrier	closed	
8400460	0.42	existing	1	eliminate	barrier	closed	
8400480	0.80	proposed	1	eliminate	barrier	closed	
8410000	0.96	existing	1	eliminate	barrier	inactive	Elf Point
8415000	1.25	existing	1	eliminate	barrier	closed	Elf Point
8420000	0.20	proposed	1	eliminate	barrier	closed	
842200	4.50	proposed	1	prohibit	gate	inactive	
8422100	0.50	proposed	1	eliminate	barrier	closed	
8422200	1.00	proposed	1	eliminate	barrier	closed	
8422300	0.70	proposed	1	eliminate	barrier	closed	
8422400	0.70	proposed	1	eliminate	barrier	closed	
8430000	13.18	existing	1/2	prohibit	barrier	close	open to mile post 10.5
8430010	0.50	proposed	1	eliminate	barrier	closed	
8430050	1.20	both	1	eliminate	barrier	closed	close all
8430060	0.70	proposed	1	eliminate	barrier	closed	
8430080	0.60	both	1	eliminate	barrier	closed	close all
8430200	1.00	both	1	eliminate	barrier	closed	close all
8430250	0.70	proposed	1	eliminate	barrier	closed	
8430280	0.40	proposed	1	eliminate	barrier	closed	
8430290	0.63	both	1	eliminate	barrier	closed	close all
8430295	0.60	proposed	1	eliminate	barrier	closed	
8430297	0.33	existing	1	eliminate	barrier	closed	
8430298	0.40	existing	1	eliminate	barrier	closed	
8430299	0.21	existing	1	eliminate	barrier	closed	
8430300	0.70	proposed	1	eliminate	barrier	closed	
8430450	0.65	existing	1	eliminate	barrier	closed	
8430500	1.70	existing	1	eliminate	barrier	closed	
8430550	0.50	existing	1	eliminate	barrier	closed	
8430553	0.20	existing	1	eliminate	barrier	closed	
8430570	0.60	proposed	1	eliminate	barrier	closed	
8430600	0.71	existing	1	eliminate	barrier	closed	

E Appendix

Road Number	Length (miles)	Existing/ Proposed	Post Sale Maintenance Level	Road Management Objective	Closure Method	AFRPR Closure Status	Remarks
8435000	3.79	both	1	eliminate	barrier	closed	close all
8435050	0.34	existing	1	eliminate	barrier	closed	
8435070	0.70	existing	1	eliminate	barrier	closed	
8435100	0.28	existing	1	eliminate	barrier	closed	
8435150	0.28	existing	1	eliminate	barrier	closed	
8435180	0.34	existing	1	eliminate	barrier	closed	
8437000	3.00	proposed	1	eliminate	barrier	inactive	
8437200	0.40	proposed	1	eliminate	barrier	closed	
8440000	3.54	existing	2	accept		active	
8440100	3.04	both	½	eliminate	barrier	closed	close at miles post 1.5
8440110	0.30	proposed	1	eliminate	barrier	closed	
8440112	0.30	proposed	1	eliminate	barrier	closed	
8440113	0.30	proposed	1	eliminate	barrier	closed	
8440115	0.30	proposed	1	eliminate	barrier	closed	
8440200	0.43	existing	1	eliminate	barrier	closed	
8441000	1.40	existing	1	eliminate	barrier	inactive	
8441100	1.00	existing	1	eliminate	barrier	closed	
8442000	3.88	existing	1	eliminate	barrier	closed	present closed
8442100	0.98	existing	1	eliminate	barrier	closed	
8444000	4.34	both	1	eliminate	barrier	inactive	
8444050	1.05	existing	1	eliminate	barrier	closed	
8444100	0.50	existing	1	eliminate	barrier	inactive	
8444190	0.30	proposed	1	eliminate	barrier	close	
8445000	1.70	proposed	1	eliminate	barrier	closed	
8445100	0.40	proposed	1	eliminate	barrier	closed	
8446000	8.20	existing	2	accept	gate	active	
8446100	0.90	existing	1	eliminate	barrier	inactive	
8446200	1.09	existing	1	eliminate	barrier	closed	

Source: Oien 1997.

Road Condition Survey Data

Table Road Condition Survey Data-1

Roads surveyed in the Sea Level Project Area in 1997.

Road Number	Begin Survey (MP)	End Survey (MP)	Date
8400280	0	1.07	09/18/97
8400000	23.67	16.91	08/25/97
8400300	0	0.56	09/10/97
8400452	0	0.82	09/05/97
8400450	1.58	2.52	09/04/97
8430600	0	0.71	09/10/97
8430000	0	13.36	09/09/97
8435000	0	1.72	09/16/97
8400000	23.64	27.27	09/17/97
8444000	0	2.83	09/11/97
8440000	0	2.69	08/26/97
8400440	1.08	1.69	08/26/97
8400450	1.62	2.52	09/04/97
8430050	0	0.7	09/05/97
8430200	0	0.5	09/04/97
8430500	0	1.85	08/25/97
8430550	0	0.43	08/25/97
8440100	0	1.45	08/26/97
8440200	0	0.4	08/26/97
8440441	0	0.1	08/26/97

Table Road Condition Survey Data-2
 Inventoried culverts where at least 25 percent of the cross-sectional area was reduced by blockage.

Road	Mile- post	Percent			Inlet				Action			Chan- nel		Fish Habitat	Fish Presence			
		Culvert Width	Structural	Blockage	Percent	Catch Basin	Ditch Block	Perch Height	Ero- sion	Outlet Erosion	Diver- sion	Failure required	Re- tion			Ac- tion	Type	HC
84	26.18	FP	48	20	35	N	I	0	N	N	NO	ST	M	ORG	IIT	PA1	BT	FNV
8430050	0.11	FP	24	50	95	M	N	0.5	N	N	NO	FF	C	NON	IIT	HC2	BT	RBT
84	23.64	WQ	24	5	60	N	M	2.3	N	N	NO	OT	M	ORG	IV			
84	23.81	WQ	18	0	40	N	N	0	N	N	NO	SD	L	NON	IV			
84	23.9	WQ	18	0	30	M	N	0	N	N	NO	SD	M	NON	IV			
84	24.81	WQ	24	5	30	B	N	0.3	N	N	NO	NO	M	NON	III	PA2		
84	25.06	WQ	24	5	30	B	I	0	N	Y	NO	WD	M	ORG	IV			
84	26.28	WQ	18	40	30	N	N	0.4	N	N	DP	ST	H	NON	IV			
8430	13.17	WQ	36	5	90	M	M	0.3	Y	N	DP	FF	H	NON	IV			
8435	0.47	WQ	18	5	40	N	I	0.8	N	N	NO	NO	L	ORG	IV			
8435	1.16	WQ	18	0	40	M	N	0	N	N	DD	WD	M	NON	IV			
8440	0.21	WQ	36	5	30	N	N	0	N	N	NO	OT	M	RFL	IV			
8440	0.71	WQ	36	50	90	I	I	0	N	Y	NO	ST	C	NON	IV			
8440	0.92	WQ	24	0	80	M	M	0	Y	Y	DD	SD	L	BLD	IV			
8440	1.15	WQ	18	0	25	M	N	0	N	N	NO	OT	M	NON	IV			
8440	2.10	WQ	18	0	30	N	N	0	N	N	NO	WD	L	ORG	IV			
8440	2.34	WQ	36	10	25	N	N	2.5	N	Y	NO	WD	L	ORG	III	HC1	DS	
8444	1.95	WQ	48	0	40	I	N	3.3	N	N	NO	NO	N	ORG	III	HC2		
8444	2.20	WQ	18	0	40	B	N	0	N	N	NO	WD	M	NON	IV			
8444	2.28	WQ	60	3	60	I	N	1.6	N	N	NO	SD	H	NON	III	HC5		

8444	2.30	WQ	18	0	66	B	B	0.4	Y	N	DR	SD	M	ORG	IV
8444	2.62	WQ	24	15	95	N	N	2.1	Y	Y	DR	WD	C	NON	
8400440	1.67	WQ	18	40	95	1	N	1.8	N	N	NO	ST	C	NON	IV
8400450	1.76	WQ	24	15	30	N	N	0	N	Y	NO	CF	H	ORG	IV
8400450	1.76	WQ	24	15	30	N	N	0	N	Y	NO	CF	H	ORG	IV
8400450	2.27	WQ	24	20	90	1	N	0	N	N	DP	SD	H	NON	IV
8400450	2.27	WQ	24	20	90	1	N	0	N	N	DP	SD	H	NON	IV
8430500	0.33	WQ	18	25	95	M	N	0.9	N	N	DD	WD	M	ORG	IV
8430500	0.61	WQ	18	15	65	N	I	0	N	N	NO	WD	N	ORG	IV
8430550	0.21	WQ	18	0	85	N	N	1.5	N	N	NO	NO	N	ORG	IV
8430550	0.24	WQ	18	0	95	M	1	0	Y	N	DP	WD	H	ORG	IV
8430550	0.43	WQ	18	0	60	M	1	0.4	N	N	NO	OT	M	NON	IV
8440100	0.25	WQ	24	25	55	M	1	2.7	N	N	NO	ST	L	ORG	III
84	23.98	DR	18	5	45	N	N	0	N	N	NO	SD	M	NON	
84	24.76	DR	18	40	30	N	M	0	Y	N	DP	CF	H	NON	
84	24.94	DR	18	0	85	N	N	0	N	N	DP	SD	M	NON	
84	24.97	DR	18	10	30	N	N	0	N	N	NO	NO	M	ORG	
8435	1.02	DR	18	50	50	1	N	0.6	N	N	DD	FF	H	NON	
8435	1.12	DR	18	5	30	M	N	0	N	N	NO	SD	M	NON	
8435	1.46	DR	18		100	M	N		N		DP	FF	H	NON	
8440	0.86	DR	18	0	85	M	M	3.7	N	Y	DD	OT	M	ORG	
8440	2.07	DR	18	0	80	M	N	0	Y	N	NO	SD	L	NON	
8440	2.24	DR	18	40	95	M	1	0	N	N	NO	WD	H	ORG	
8440	2.69	DR	18	0	40	M	M	0	N	N	NO	FF	L	RFL	
8444	0.54	DR	18	0	100	B	N	0.6	Y	N	DR	SD	H	ORG	

8444	0.56	DR	36	5	40	M	N	0.5	N	N	NO	NO	L	ORG
8444	2.59	DR	18	?	100	M	N	5.4	Y	N	DR	CF	H	NON
8400440	1.48	DR	18	0	40	M	I	0	N	N	NO	SD	M	NON
8400450	1.81	DR	18	15	30	M	M	12	Y	N	DD	SD	H	ORG
8400452	0.12	DR	18	60	80	N	B	4	N	N	DD	ST	H	ORG
8430200	0.04	DR	18	15	40	M	I	0	N	N	NO	SD	M	NON
8430200	0.34	DR	18	0	95	M	I	0	N	N	NO	SD	H	NON
8430200	0.39	DR	18	0	25	M	I	0	N	N	NO	SD	M	NON
8430500	0.74	DR	18	0	95	M	M	0.1	Y	Y	DD	SD	L	BLD IV
8430500	1.14	DR	18	40	80	N	N	0.3	N	N	DD	CF	H	NON
8430500	1.2	DR	18	50	70	N	N	0	N	N	DD	ST	L	NON
8430500	1.85	DR	18	0	35	I	I	3	N	N	NO	WD	L	ORG
8440100	0.11	DR	18	90	95	B	B	0.9	N	N	DD	CF	H	NON
8440100	0.5	DR	18	85	90	B	M	0.6	N	N	DP	ST	H	NON
8440100	1.45	DR	18	0	35	I	I	0	N	N	NO	WD	N	ORG
8440200	0.28	DR	108	0	85	N	N	0.4	N	N	DR	FF	M	RFL

Table Road Condition Survey Data-3
Road Condition Survey Data 1997

road	milepost	parameter	distance	cmp width	% struc- tural	% blockage	ditch block length	cmp length	perch height	inlet erosion	outlet erosion	diversion	failure	action required	action taken	ahmu class	chan- nel type	fish habitat
84	23.64	WQ		24	5	60	M	29	2.3	N	N	NO	OT	M	ORG	IV		
84	23.68	CN										DP	OT	H	NON			
84	23.72	DP	220									DP	CF	M	NON			
84	23.74	WQ		18	5	0	N	35	0	N	N	NO	NO	N	ORG	IV		
84	23.81	WQ		18	0	40	N	30	0	N	N	NO	SD	L	NON	IV		
84	23.86	WQ		18	10	0	N	40	0.2	N	N	NO	OT	M	NON	IV	HC2	
84	23.9	WQ		18	0	30	N	30	0	N	N	NO	SD	M	NON	IV		
84	23.96	WQ		18	5	0	N	30	0	N	N	NO	NO	L	NON	IV		
84	23.98	DR		18	5	45	N	30	0	N	N	NO	SD	M	NON			
84	24.09	WQ		24	0	0	N	32	0	N	N	NO	NO	L	NON	IV		
84	24.25	FP		72	2	5	N	60	0	Y	N	NO	NO	N	NON	I	PA5	BT
84	24.31	DP	100									DP	CF	M	NON			
84	24.34	DR		24	0	15	N	30	0	N	N	NO	NO	N	NON			
84	24.39	WQ		24	0	5	N	30	0	N	N	NO	NO	N	NON	IV		
84	24.46	WQ		24	0	0	M	30	0.1	Y	N	NO	NO	L	NON	IV		
84	24.62	DP	224									DR	CF	H	NON			
84	24.72	DP	450									DR	CF	H	NON			
84	24.76	DR		18	40	30	M	26	0	Y	N	DP	CF	H	NON			
84	24.81	WQ		24	5	30	N	40	0.3	N	N	NO	NO	M	NON	III	PA2	
84	24.94	DR		18	0	85	N	32	0	N	N	DP	SD	M	NON			

84	24.97	DR		18	10	30	N	30	0	N	N	NO	NO	M	ORG	
84	24.99	DP	100									DD	OT	M	NON	
84	25.01	DR		18	15	32	M	0	N	N	N	DD	FF	H	NON	
84	25.06	WQ		24	5	50	I	0	N	Y	NO	WD	IV	M	ORG	
84	25.23	DR		18	0	10	N	0.9	N	N	NO	SD	NON	M	NON	
84	25.25	DP	75								DR	CF	NON	M	NON	
84	25.35	DP	125								DR	CF	NON	M	NON	
84	25.6	DP	200								DR	CF	NON	M	NON	
84	25.73	WQ		24	15	0	N	40	0	Y	N	NO	NO	L	ORG	III HC1
84	25.88	WQ		18	0	20	N	40	0.1	N	N	NO	NO	L	ORG	IV
84	25.99	WQ		18	0	10	N	40	0.2	N	N	NO	NO	M	NON	IV
84	26.18	FP		48	20	35	I	80	0	N	N	NO	ST	M	ORG	IIT PA1 BT
84	26.28	WQ		18	40	30	N	40	0.4	N	N	DP	ST	H	NON	IV
84	26.4	DP	120									DR	CF	M	NON	
84	26.47	DP	60									DR	CF	M	NON	
84	26.81	FP		84	0	5	N	80	1.2	N	N	NO	NO	N	NON	IIT PA2 BT
84	27.05	WQ		24	0	5	N	42	0.7	N	N	NO	NO	N	NON	IV
84	27.08	DR		18	0	0	N	40	0.5	N	N	NO	NO	L	NON	
84	27.27															
8430	13.03	DR		18	0	60	N	40	0	N	N	DP	EC	H	NON	
8430	13.09	DR		18	1	0	N	30	0.1	N	N	NO	NO	N	NON	
8430	13.12	SE	22									DR	FF	H	NON	
8430	13.13	DP	30									DP	FF	H	NON	
8430	13.17	WQ		36	5	90	M	45	0.3	Y	N	DP	FF	H	NON	IV
8430	13.24											DP	NO	H	NON	IV

8435	1.46	DR	18	5	20	M	25	0	N	N	DP	FF	H	NON
8435	1.47	DP	150								DP	OT	M	NON
8435	1.5	DR	18	0	10	N	32	0.5	N	N	NO	NO	L	ORG
8435	1.62	DP	40								DP	OT	M	NON
8435	1.66	DP	35								DP	OT	M	NON
8435	1.72										NO		N	NON
8440	0.09	WQ	36	5	20	M	25	0	N	N	NO	NO	N	NON IV
8440	0.21	WQ	36	5	30	N	34	0	N	N	NO	OT	M	RFL IV
8440	0.46	DR	18	5	0	N	40	4.5	N	N	NO	NO	N	NON
8440	0.56	WQ	18	5	5	N	40	2.3	N	N	NO	NO	N	NON IV
8440	0.58	WQ	18	5	5	I	40	1.3	N	N	NO	NO	N	NON IV
8440	0.6	WQ	18	0	0	N	35	0	N	N	NO	NO	N	NON IV
8440	0.71	WQ	36	50	90	I	40	0	N	Y	NO	ST	C	NON IV
8440	0.86	DR	18	0	85	M	40	3.7	N	Y	DD	OT	M	ORG
8440	0.92	WQ	24	0	80	M	40	0	Y	Y	DD	SD	L	BLD IV
8440	0.97	WQ	18	5	10	N	50	0	N	Y	NO	NO	L	ORG IV
8440	1.05	WQ	18	5	15	M	32	0	N	N	NO	NO	L	NON IV
8440	1.12	WQ	18	0	16	N	37	0	N	N	NO	NO	L	ORG IV
8440	1.14	DR	18	10	10	N	33	0	N	N	NO	NO	L	ORG
8440	1.15	WQ	18	0	25	N	33	0	N	N	NO	OT	M	NON IV
8440	1.2	WQ	48	0	10	N	40	0	N	Y	NO	NO	L	NON IV
8440	1.22	WQ	84	0	0	N	40	3	Y	Y	NO	NO	H	NON IV
8440	1.35	WQ	18	5	5	N	30	1	N	N	NO	NO	L	ORG IV
8440	1.39	WQ	18	10	10	B	30	0	Y	N	NO	NO	L	ORG IV
8440	1.55	WQ	18	0	0	M	50	0.2	N	N	NO	NO	N	NON IV

8440	1.66	WQ	60	0	0	M	66	1	N	N	NO	NO	N	NON	III	HC5	DS
8440	1.7	WQ	24	0	0	N	30	0.1	N	N	NO	NO	N	NON	IV		
8440	1.78	DR	18	0	0	M	33	0	N	N	NO	NO	N	NON			
8440	1.94	WQ	18	0	20	N	36	0	N	N	NO	FF	N	RFL	IV		
8440	2	DP															
8440	2.07	DR	18	0	80	N	30	0	Y	N	NO	SD	L	NON			
8440	2.1	WQ	18	0	30	N	60	0	N	N	NO	WD	L	ORG	IV		
8440	2.21	DR	18	0	15	N	33	0.3	N	N	NO	SD	L	ORG			
8440	2.24	DR	18	40	95	I	40	0	N	N	NO	WD	H	ORG			
8440	2.34	WQ	36	10	25	N	62	2.5	N	Y	NO	WD	L	ORG	III	HC1	DS
8440	2.46	DR	18	0	0	I	33	0	N	N	NO	NO	M	NON			
8440	2.49	CN															
8440	2.55	DP	75														
8440	2.69	DR	18	0	40	M	33	0	N	N	NO	FF	L	RFL			
8444	0.03	DP	24								DR	OT	H	NON			
8444	0.08	DR	18	0	20	N	31	3.2	N	N	NO	NO	L	ORG			
8444	0.14	DR	18	10	10	N	31	1.3	Y	N	NO	NO	M	BLD			
8444	0.16	WQ	24	1	20	N	29	2	N	N	NO	NO	M	ORG	IV		
8444	0.22	WQ	18	0	5	N	32	1.7	N	N	NO	NO	N	ORG	IV		
8444	0.24	DR	18	2	5	N	29	1.4	N	N	NO	NO	N	ORG			
8444	0.30	FP	48	0	0	N	40	2.4	Y	N	NO	NO	N	NON	III	HC2	BT
8444	0.39	DR	18	20	10	N	29	0.7	N	N	NO	ST	H	NON			
8444	0.44	WQ	36	2	0	N	34	0.8	N	N	NO	NO	N	NON	IV		
8444	0.45	DP	130								DP	SD	M	NON			
8444	0.50	FP	109	0	0	N	69	2.4	N	N	NO	NO	N	NON	IIT	HC2	BT

8444	0.52	WQ	18	0	0	N	40	0.4	N	N	NO	NO	N	NON
8444	0.54	DR	18	0	100	N	28	0.6	Y	N	DR	SD	H	ORG
8444	0.54	SE									DR	OT	H	BSN
8444	0.56	DR	36	5	40	N	34	0.5	N	N	NO	NO	L	ORG
8444	0.59	WQ	24	2	0	N	38	1.2	N	N	NO	NO	N	NON
8444	0.65	WQ	36	1	0	I	38	1.8	N	N	NO	NO	N	NON III HC5
8444	0.66	DP	65								DR	OT	H	NON
8444	0.94	DR	18	15	10	I	30	3.6	N	N	NO	NO	N	NON
8444	0.98	CE	20								DP	CF	H	NON
8444	0.98	DP	20								DP	OT	H	NON
8444	1.01	DR	18	0	0	M	30	2.2	N	N	NO	NO	L	BLD
8444	1.06	DP	75								DR	CF	M	NON
8444	1.07	WQ	18	10	2	N	32	1.8	N	N	NO	NO	L	NON IV
8444	1.11	DR	18	10	10	I	27	0.8	Y	N	NO	ST	H	NON
8444	1.16	DR	18	0	0	N	30	0.2	N	N	DD	FF	M	NON
8444	1.16	DP	38								DR	CF	M	NON
8444	1.19	DP	241											
8444	1.28	DR	18	10	10	N	64	0.5	N	N	NO	ST	M	ORG
8444	1.36	DP	366								DR	OT	M	NON
8444	1.38	CE	255								DR	CF	M	NON
8444	1.47	WQ	18	20	3	N	39	0.5	N	N	DD	ST	H	NON IV
8444	1.50	DP	72								DP	OT	H	NON
8444	1.52	DP	82								DR	CF	H	NON
8444	1.55	WQ	18	0	0	N	33	1.2	N	N	NO	NO	M	NON IV
8444	1.55	DP	261								DR	SD	M	NON

8444	1.61	WQ	18	0	0	N	35	0.7	N	N	DD	NO	M	NON	IV	
8444	1.62	DP	140								DR	SD	M	NON		
8444	1.66	WQ	24	5	20	N	50	2.5	Y	N	DD	ST	H	NON	III	HC2
8444	1.68	DP	400								DR	SD	M	NON		
8444	1.78	FP	84	0	3	I	55	0.4	N	N	NO	NO	N	NON	IIA	MM1 BT
8444	1.84	DP									DR	SD	M	NON		
8444	1.84															
8444	1.86	WQ	24	10	0	N	40	1.5	N	N	DD	ST	H	NON	IV	
8444	1.93	WQ	36	0	5	I	40	4.2	N	N	NO	NO	N	NON	IV	
8444	1.95	WQ	48	0	40	N	40	3.3	N	N	NO	NO	N	ORG	III	HC2
8444	1.99	WQ	24	1	5	I	41	1	N	N	NO	NO	N	NON	IV	
8444	2.02	DP	100								DR	CF	M	NON		
8444	2.02	CE	90								DR	CF	M	NON		
8444	2.06	DR	18	3	2	I	48	2.2	N	N	NO	NO	M	NON		
8444	2.14	WQ	18	2	3	I	40	1	N	N	NO	NO	N	BSN	IV	
8444	2.20	WQ	18	0	40	N	40	0	N	N	NO	WD	M	NON	IV	
8444	2.28	WQ	60	3	60	N	55	1.6	N	N	NO	SD	H	NON	III	HC5
8444	2.28	SE	100								DR	CF	H	NON		
8444	2.30	WQ	18	0	66	B	40	0.4	Y	N	DR	SD	M	ORG	IV	
8444	2.40	WQ	18	5	10	N	55	1.2	N	N	NO	NO	L	NON	IV	
8444	2.41	CE	188								DP	CF	M	NON		
8444	2.41	DP	165								DP	CF	M	NON		
8444	2.45	WQ	36	10	0	N	40	0.1	N	N	NO	FF	N	NON	IV	
8444	2.46	CE	165								DR	CF	M	NON		
8444	2.49	WQ	18	2	3	I	29	1.5	N	N	NO	NO	L	NON	IV	

8444	2.54	CE	425									DR	CF	H	NON	
8444	2.59	DR		18	?	100	N	40	5.4	Y	N	DR	CF	H	NON	
8444	2.62	FE	12									DR	FF	C	NON	
8444	2.62	WQ		24	15	95	N	40	2.1	Y	Y	DR	WD	C	NON	
8444	2.70	CE	425													
8444	2.70	DP	425													
8444	2.83															
8400280	0.16											NO	NO	N	NON	
8400280	0.22	DP	200									DR	CF	M	NON	
8400280	0.29											NO	NO	N	NON	
8400280	0.35	DP	110									DR	CF	M	NON	
8400280	0.47	DP	370									DP	CF	M	NON	
8400280	0.53											NO	NO	N	NON	
8400280	0.59	DP	210									DR	CF	M	NON	
8400280	0.61											NO	NO	N	NON	
8400280	0.7	DP	35									DR	CF	M	NON	
8400280	0.75											NO	NO	N	NON	
8400280	0.8	DP	140									DR	CF	M	NON	
8400280	1.07															
8400300	0.03	CN											OT	H	NON	IIA HC2 US
8400300	0.08												NO	H	NON	
8400300	0.19	FP											NO	H	NON	IIA MC2 BT
8400300	0.23												NO	H	NON	III PAI
8400300	0.32												NO	H	NON	III MC2
8400300	0.36	SE	999										OT	H	NON	

[illegible]

8430500	0.33	WQ	18	25	95	N	30	0.9	N	N	DD	WD	M	ORG	IV
8430500	0.47	DR	18	5	5	I	34	0.3	N	Y	NO	NO	L	NON	IV
8430500	0.61	WQ	18	15	65	I	33	0	N	N	NO	WD	N	ORG	IV
8430500	0.67	DR	18	0	10	I	35	0	N	Y	NO	NO	N	ORG	IV
8430500	0.74	DR	18	0	95	M	36	0.1	Y	Y	DD	SD	L	BLD	IV
8430500	0.89	DR	18	5	5	I	30	0	N	N	NO	NO	L	NON	IV
8430500	0.91	FE	42												
8430500	0.96	DR	18	15	15	I	30	0.2	N	N	NO	NO	N	NON	IV
8430500	1.14	DR	18	40	80	N	35	0.3	N	N	DD	CF	H	NON	
8430500	1.2	DR	18	50	70	N	30	0	N	N	DD	ST	L	NON	
8430500	1.22	DR	24	0	0	I	35	1.4	N	N	NO	NO	N	NON	
8430500	1.26	WQ	24	20	20	I	35	0.1	N	Y	NO	ST	L	NON	IV
8430500	1.29	WQ	24	0	20	I	30	1.8	N	N	NO	WD	N	RFL	IV
8430500	1.31	DR	24	0	0	I	32	0.2	N	N	NO	NO	N	NON	
8430500	1.33	CE	200												
8430500	1.33	CN	24								DR	CF	C	NON	
8430500	1.37	CN	18								DR	CF	C	NON	
8430500	1.59	DR	24	0	0	I	30	0.1	N	N	NO	NO	L	NON	
8430500	1.67	DR	18	0	0	I	30	0.1	N	N	NO	NO	N	NON	
8430500	1.85	DR	18	0	35	I	30	3	N	N	NO	WD	L	ORG	
8430550	0.21	WQ	18	0	85	N	40	1.5	N	N	NO	NO	N	ORG	IV
8430550	0.24	WQ	18	0	95	I	30	0	Y	N	DP	WD	H	ORG	IV
8430550	0.27	WQ	18	10	10	I	30	0.3	N	N	NO	NO	N	NON	IV
8430550	0.29	SE	30												
8430550	0.38	WQ	18	0	0	I	27	0	N	N	NO	NO	N	NON	IV

8430550	0.43	WQ	18	0	60	I	30	0.4	N	N	NO	OT	M	NON	IV
8430600	0.01	DR	18	0	0	N	40	0.2	N	N	NO	NO	N	NON	
8430600	0.05	DR	18	10	0	I	30	0.5	N	N	NO	ST	N	NON	
8430600	0.1	DR	18	2	0	N	39	0.8	N	N	NO	NO	N	NON	
8430600	0.21	DR	18	0	20	N	28	0	N	N	NO	SD	L	ORG	
8430600	0.36	DE	45								DR	OT	H	NON	
8430600	0.36	CN											H	NON	
8430600	0.39	WQ	18	5	0	I	29	0.3	N	N	NO	NO	L	NON	IV
8430600	0.45	DP									DP	OT	M	NON	
8430600	0.46	CN									DP	OT	H	NON	
8430600	0.48	SE	240								DP	OT	H	NON	
8430600	0.48	DP													
8430600	0.55	CE	122								DP	OT	H	NON	
8430600	0.55	DP	122												
8430600	0.71														
8440100	0.11	DR	18	90	95	B	40	0.9	N	N	DD	CF	H	NON	
8440100	0.17	DR	18	0	0	I	40	2.4	N	N	NO	NO	N	NON	
8440100	0.25	WQ	24	25	55	I	40	2.7	N	N	NO	ST	L	ORG	III HC5
8440100	0.45	DR	18	0	0	B	40	1.8	N	N	NO	NO	N	NON	
8440100	0.5	DR	18	85	90	M	40	0.6	N	N	DP	ST	H	NON	
8440100	0.62	DR	18	15	15	M	40	0.2	N	N	NO	ST	L	NON	
8440100	0.67	DR	18	0	0	I	40	0.5	N	N	NO	NO	N	NON	
8440100	0.76	DR	18	0	0	I	40	0	N	N	NO	NO	N		
8440100	0.9	WQ	18	0	0	I	40	0.4	N	N	NO	NO	N		IV HC5
8440100	1.39	DR	18	0	15	I	40	0	N	N	NO	OT	N	ORG	

[illegible]

Table Road Condition Survey Data-4

Inventory sites where diversion of surface flow onto the road surface was observed.

Road	Mile Post	Parameter	Distance	Percent Structural Blockage	Percent Catchment	Cul- vert Length	Perch Height	Inlet Ero- sion	Outlet Ero- sion	Road Grade	Diver- sion	Failure	Action Re- quired	Action Taken	Ahm- u Class
84	23.64	WQ		5	60	N	29	2.3	N	4	NO	OT	M	ORG	IV
84	24.62	DP	224							4	DR	CF	H	NON	
84	24.72	DP	450							3	DR	CF	H	NON	
84	25.25	DP	75							5	DR	CF	M	NON	
84	25.35	DP	125							5	DR	CF	M	NON	
84	25.6	DP	200							10	DR	CF	M	NON	
84	26.4	DP	120							3	DR	CF	M	NON	
84	26.47	DP	60							3	DR	CF	M	NON	
8430	13.12	SE	22							2	DR	FF	H	NON	
8435	0.4	CE	35							2	DR	CF	H	NON	
8435	0.4	CN								2	DR	CF	H	NON	
8435	1.38	CN									DR	OT	H	NON	
8444	0.03	DP	24							5	DR	OT	H	NON	
8444	0.54	DR		0	100	B	28	0.6	Y	5	DR	SD	H	ORG	
8444	0.54	SE								5	DR	OT	H	BSN	
8444	0.66	DP	65							10	DR	OT	H	NON	
8444	1.06	DP	75								DR	CF	M	NON	
8444	1.16	DP	38							10	DR	CF	M	NON	
8444	1.19	CE	241							11	DR	OT	M	NON	
8444	1.36	DP	366								DR	OT	M	NON	
8444	1.38	CE	255								DR	CF	M	NON	
8444	1.52	DP	82								DR	CF	H	NON	
8444	1.55	DP	261							6	DR	SD	M	NON	

8444	1.62	DP	140									DR	SD	M	NON
8444	1.68	DP	400									DR	SD	M	NON
8444	1.84	DP									5	DR	SD	M	NON
8444	2.02	DP	100								11	DR	CF	M	NON
8444	2.02	CE	90								11	DR	CF	M	NON
8444	2.28	SE	100								12	DR	CF	H	NON
8444	2.30	WQ		0	66	B	40	0.4	Y	N	13	DR	SD	M	ORG
8444	2.46	CE	165									DR	CF	M	NON
8444	2.59	DR		?	100	M	40	5.4	Y	N	2	DR	CF	II	NON
8444	2.62	FE	12								3	DR	FF	C	NON
8444	2.62	WQ		15	95	N	40	2.1	Y	Y	4	DR	WD	C	NON
8400280	0.22	DP	200									DR	CF	M	NON
8400280	0.35	DP	110									DR	CF	M	NON
8400280	0.59	DP	210									DR	CF	M	NON
8400280	0.7	DP	35									DR	CF	M	NON
8400280	0.8	DP	140									DR	CF	M	NON
8400452	0.13	SE	80									DR	OT	H	NON
8400452	0.14	CE	50									DR	CF	M	NON
8400452	0.14	DP	50									DR	CF	M	NON
8400452	0.48	DP	75									DR	CF	M	NON
8400452	0.14	DP	50									DR	CF	M	NON
8430500	1.33	CN									12	DR	CF	C	NON
8430500	1.37	CN										DR	OT		
8430600	0.36	DE	45								5	DR	OT	II	NON
8440200	0.28	DR		0	85	N	40	0.4	N	N	4	DR	FF	M	RFL

Table Road Condition Survey Data-5
Sites identified for ditch maintenance

road	milepost	parameter	distance	road grade	diversion	failure	action required	action taken
84	23.72	DP	220	8	DP	CF	M	NON
84	24.31	DP	100	2	DP	CF	M	NON
84	24.62	DP	224	4	DR	CF	H	NON
84	24.72	DP	450	3	DR	CF	H	NON
84	24.99	DP	100	6	DD	OT	M	NON
84	25.25	DP	75	5	DR	CF	M	NON
84	25.35	DP	125	5	DR	CF	M	NON
84	25.6	DP	200	10	DR	CF	M	NON
84	26.4	DP	120	3	DR	CF	M	NON
84	26.47	DP	60	3	DR	CF	M	NON
8435	0.55	DP	150	3	DP	OT	M	NON
8435	0.7	DP	65	3	DP	CF	M	NON
8435	0.92	DP	400		DP	SD	M	NON
8435	1.36	DP	300		DP	SD	M	NON
8435	1.47	DP	150	2	DP	OT	M	NON
8440	2.55	DP	75					
8444	0.45	DP	130		DP	SD	M	NON
8444	0.66	DP	65	10	DR	OT	H	NON
8444	1.06	DP	75		DR	CF	M	NON
8444	1.19	DP	241					
8444	1.36	DP	366		DR	OT	M	NON
8444	1.50	DP	72		DP	OT	H	NON
8444	1.52	DP	82		DR	CF	H	NON
8444	1.68	DP	400		DR	SD	M	NON
8444	2.02	DP	100	11	DR	CF	M	NON
8444	2.41	DP	165		DP	CF	M	NON
8444	2.70	DP	425					
8400280	0.22	DP	200		DR	CF	M	NON
8400280	0.35	DP	110		DR	CF	M	NON
8400280	0.47	DP	370		DP	CF	M	NON

E Appendix

8400280	0.59	DP	210		DR	CF	M	NON
8400280	0.8	DP	140		DR	CF	M	NON
8400300	0.36	DP	426	2	DP	OT	H	NON
8400450	1.81	DP	160		DP		H	NON
8400450	1.81	DP	160		DP		H	NON
8400450	2.3	DP	105					
8400450	2.32	DP	91					
8400450	2.5	DP	100		DR	CF	H	NON
8400450	2.5	DP	100		DR	CF	H	NON
8400452	0.06	DP	300		DP	OT	H	NON
8400452	0.11	DP	50		DR	CF	M	NON
8400452	0.14	DP	50		DR	CF	M	NON
8400452	0.48	DP	75		DR	CF	M	NON
8430600	0.48	DP	260					
8430600	0.55	DP	122					

Appendix F

Recommended Sale Area Improvement Projects

ՀԱՅԿԱՍՏԱՆԻ ՀԱՆՐԱՊԵՏՈՒԹՅԱՆ ԿՐԹԱԿԱՆ ԿԵՆՏՐՈՆ

ՀԱՅԿԱՍՏԱՆԻ ՀԱՆՐԱՊԵՏՈՒԹՅԱՆ
ԿՐԹԱԿԱՆ ԿԵՆՏՐՈՆ

Recommended Sale Area Improvement Projects

Essential Reforestation

Natural Regeneration Stocking Surveys

Objective/Justification

The objective of natural regeneration surveys is to monitor the occurrence of natural regeneration following timber harvest. The National Forest Management Act (NFMA) of 1976 states:

"It is the policy of Congress that all forested lands in the National Forest system shall be maintained in appropriate forest cover with species of trees, degree of stocking, rate of growth, and condition of stand designed to secure the maximum benefits of multiple use sustained yield management in accordance with land management plans."

Treatment

Stocking surveys shall be conducted three growing seasons following harvest to assure that satisfactory levels of natural stocking have been achieved as prescribed in the stocking level guides of the Forest Service Handbook (FSH) 2409.17, Silvicultural Practices, Chapter 9.

Needs/Cost

The reporting and record keeping required to track and monitor the harvesting, regeneration, and the certification process is included in the regeneration survey costs. Surveys will be conducted at a direct cost of \$8.50/acre.

The following shows the adjustments to the direct cost of a 4 percent inflation rate for 5 years (the time at which the surveys will occur) and for overhead (OH) costs.

$$\$8.50/\text{acre} \times 1.04^5 = 10.34/\text{acre}$$

$$10.34/\text{acre} \times 1.5303(\text{OH}) = \$15.83/\text{acre}$$

See the Proposed Essential Reforestation tables, at the end of this section, for a listing of units in need of surveys by alternative. Table Appendix F-1 displays the total anticipated regeneration survey costs by alternative.

F Appendix

Table Appendix F-1
Anticipated Regeneration Survey Cost

Alternative	Cost/Acre	Acres	Total Cost
2	\$15.83	2,843	\$ 45,005
3	\$15.83	1,620	\$ 25,645
4	\$15.83	1,226	\$ 19,408
5	\$15.83	848	\$ 13,424
6	\$15.83	390	\$ 6,174

Source: Trulock 1997.

Cone Collection

Objective/Justification

The objective of cone collection is to collect an adequate amount of seed from the appropriate seed zones to accomplish required artificial regeneration under this environmental document. All seed will be collected from phenotypically superior trees which exhibit desirable form, height, branch angle, resistance to insects and disease, etc. The Ketchikan Area has sufficient spruce seed on hand to meet its spruce-planting needs however, lacks seed for Alaska yellowcedar and western redcedar planting. Planting roughly 75 acres of western redcedar and Alaska yellowcedar in all action alternatives will require 22,500 seedlings (75 acres X 300 trees per acre). Approximately 40,000 seedlings can be produced per pound of clean seed; therefore 0.6 pounds of clean seed or 3 bushels of cones must be collected (5 bushels of cones yield 1 pound of seed).

Treatment

Cone collections will occur in moderate or good cone collecting years based on field surveys. Collections will be done by force account crews in the fall after the cones have matured. Collection will involve identifying phenotypically superior trees, felling the tree, picking and bagging the cones, tagging the bags, and transporting the cones to Petersburg where the seed will be cleaned and stored until needed. Seed collections will be separated by Southeast Alaska seed zones to make sure the planting stock is adapted to the location where it will be planted.

Needs/Cost

Eleven bushels of seed will be collected from the appropriate seed zones at a direct cost of \$250.00/bushel.

The following shows the adjustments to the direct cost of a 4 percent inflation rate for 2 years (the time at which seeding will occur) and for overhead (OH) costs.

$$\$250.00/\text{bushel} \times 1.04^2 = \$270.40/\text{bushel}$$

$$\$270.40/\text{bushel} \times 1.5112(\text{OH}) = \$408.63/\text{bushel}$$

The cone collection cost for each action alternative is \$1,225.89 (\$408.63 per bushel multiplied by 3 bushels).

Planting**Objective/Justification**

Planting will occur only on those sites where natural regeneration will not result in a fully stocked stand of desirable species within 5 years after harvest, as required under the NFMA (1976).

The requirements and guidelines for minimum acceptable stocking are listed in FSH 2409.17. For a display, by unit, of the acres which need to be planted, see the Proposed Essential Reforestation Tables F-5 through F-9, at the end of this Appendix.

The sites to be planted fall under three general categories:

1. Floodplains and Alluvial Fans

These areas usually have deep well drained soils with poorly developed horizons due to periodic flooding. Mature stands rarely support more than 100 to 150 stems per acre. Species composition is primarily spruce growing on raised hummocks. Perturbation results in heavy brush (alder, salmonberry, and devil's club) competition that will delay natural regeneration and suppress tree growth for a period of 20 to 50 years following harvest. The vast majority of the Tonowek and Tuxekan soil series have been excluded from harvesting in recent years, but small inclusions will be treated in this operating period. These sites will be planted with Sitka spruce.

2. Dense Brush or Inadequate Seed Source

Sparsely stocked sites with an established ground cover of dense vegetation such as salmonberry or devil's club will retard stocking and growth for at least 20 years. Sites lacking a satisfactory seed source will be planted with Sitka spruce. These sites include high-elevation sites, sites adjacent to muskegs or lakes, and immature stands where natural regeneration cannot be assured or even reasonably expected within 5 years after harvest.

3. Somewhat Poorly-Drained to Poorly-Drained Soils, Low-Productivity Cedar Sites

These sites currently support decadent, low-quality sawtimber with cedar making up at least ten percent of the canopy. Getting natural cedar regeneration on these sites is unlikely because:

- Cedar has limited capabilities to disperse seed over long distances from the parent tree. Alaska yellowcedar seed dispersion is limited to 300 to 400 feet.
- Alaska yellowcedar is not a prolific seed producer. Cone crops are infrequent and germination rates are low.
- Unlike "down-south" cedar, the two cedar species here in Southeast Alaska display a greater degree of intolerance to shade. Local cedar is unable to regenerate under its own canopy and advanced cedar reproduction is generally absent on the forest floor.
- Low-volume cedar stands often result in heavy slash accumulation which can inhibit natural reproduction. Prescribed burning may be required to lower slash levels for planting ease.

Due to the factors listed above, planting of western redcedar and/or Alaska yellowcedar to improve productivity and maintain tree species diversity shall be addressed in the silvicultural prescription for cedar stands. The "Relationship of Forest Plant Association to Soils Series...Ketchikan Area" tables, which are found in the back of the "Forest Plant Association Management Guide, Ketchikan Area, Tongass National Forest" (DeMao 1992) were used to identify potential sites.

Treatment

Floodplains/alluvial fans and dense shrub/inadequate seed source planting areas will be planted with 1-0 Sitka spruce stock. The low productivity/cedar sites will be planted with 1-0 western redcedar or Alaska yellowcedar as specified in the Proposed essential reforestation tables. Generally a mixture of western redcedar and Alaska yellowcedar will be planted on sites below 800 feet in elevation on north and east aspects, and below 1,000 feet on south and west aspects. Cedar sites with elevations above those listed have been scheduled for Alaska yellowcedar planting only.

F Appendix

Needs/Cost

The direct cost of planting is \$300.00 per acre. See the Proposed Essential Reforestation tables listing units requiring treatment.

The following shows the adjustments to the direct cost of a 4 percent inflation rate for 5 years (the time at which the planting will occur) and for overhead (OH) costs.

$$\$300.00/\text{acre} \times 1.04^5 = \$365.00/\text{acre}$$

$$\$365.00/\text{acre} \times 1.5303(\text{OH}) = \$558.56/\text{acre}$$

Table Appendix F-2
Planting Costs

Alternative	Cost Per Acre	Required Acres	Cost
2	\$558.56	73	\$40,775
3	\$558.56	43	\$24,018
4	\$558.56	32	\$17,874
5	\$558.56	17	\$ 9,496
6	\$558.56	12	\$ 6,703

Source: Trulock 1997.

Plantation Survival Surveys

Objective/Justification

The objective of plantation survival surveys is to monitor the survival and condition of planted trees one and three growing seasons following planting and certify that minimum stocking levels are achieved per NFMA (1976).

Treatment

Plantation survival stake rows will be established and surveyed the first and third growing seasons following planting. The 3rd-year survey will also determine the overall stocking, for both planted and established natural regeneration.

Needs/Cost

First- and 3rd-year survival surveys will have a direct cost of \$17.00 per acre. See enclosed detailed listing of units needing surveys by alternative.

The following shows the adjustments to the direct cost of a 4 percent inflation rate for 6 years (the time at which the surveys will occur) and for overhead (OH) costs.

$$\$17.00/\text{acre} \times 1.04^6 = \$21.51/\text{acre}$$

$$\$21.51/\text{acre} \times 1.5303(\text{OH}) = \$32.92/\text{acre}$$

Table Appendix F-3
Plantation Survival Surveys

Alternative	Cost/Acre	Acre	Cost
2	\$32.92	73	\$ 2,403.16
3	\$32.92	43	\$ 1,415.56
4	\$32.92	32	\$ 1,053.44
5	\$32.92	17	\$ 559.64
6	\$32.92	12	\$ 395.04

Source: Trulock 1997.

Mitigation

Slide Stabilization and 2-year Monitoring

Objective/Justification

The objective is to stabilize, rehabilitate and monitor harvest-activity-initiated landslides, within units and along roads, which are no longer the responsibility of the purchaser to treat.

Approximately 1 debris slide, 5 acres or larger, occurs for every 2,240 of harvested acres Forest wide (TLMP 1997). If slides smaller than 5 acres are included, then the number of debris slides occurring for every 2,240 harvested acres would increase 1½ fold. The average size of a slide on the Ketchikan Area is 5 acres (Loggy 1974).

The majority of these slides normally occur within a 5-to 10-year period after cutting or roading due to a combination of the following:

- over steepened side slopes,
- storms with high wind and intensive rain fall, and
- where the roots of severed trees have lost their holding strength (in 3 to 5 years).

Approximately 390 to 2,843 acres are proposed for harvest this period. This would equate to 0.17 to 1.27 natural slides and slides associated with harvest. At 5 acres per slide, this would equate to 0.85 to 6.35 acres of soil disturbance that would need stabilizing and rehabilitation.

Treatment

Slides that have occurred will be rehabilitated with introduced grasses and/or herbaceous vegetation. Follow up monitoring will be done for 2 years after initial rehabilitation to insure stabilization has been accomplished.

The treatment is to stabilize surface soil erosion to prevent or reduce further sediment introduction into streams and loss in soil productivity of the remaining soil in the slide trace.

Needs/Cost

It is estimated that 6.35 acres of landslides will need stabilization at a direct cost of \$550 per acre. Each stabilized landslide will be monitored for 2 years after initial stabilization. This will cost \$500 per slide, per year.

F Appendix

The following shows the adjustments to the direct cost for:

1. A 4 percent inflation rate for 6 years (the time stabilization will occur) and for overhead (OH) costs.

$$\$550/\text{acre} \times 1.04^6 = 695.75/\text{acre}$$

$$\$695.75/\text{acre} \times 1.5303 \text{ (OH)} = \$1,064.70/\text{acre}$$

2. A 4 percent inflation rate for 8 years (the time monitoring will occur) and for overhead (OH) costs.

$$\$500/\text{slide} \times 1.04^8 = \$684.29/\text{slide}$$

$$\$684.29/\text{slide} \times 1.5303 \text{ (OH)} = \$1,047.16/\text{slide}$$

All alternatives use the estimate of 1.27 slides and 6.35 acres disturbed. Therefore, for each alternative:

Slide Rehabilitation will cost \$6,760.81 (\$1,064.70/acre X 6.35 acres) and

Monitoring will cost \$1,329.89 (\$1,047.16/slide X 1.27 slides).

Seeding of Roads

Objective/Justification

Seeding of roads is consistent with Regional and Forest direction to maintain or enhance wildlife habitat capability.

The objective is to increase forage production for wildlife within and adjacent to harvest units. A secondary objective would be to minimize soil loss, sedimentation and inhibit alder regrowth.

Treatment

The timber sale operator is responsible for seeding all temporary roads and landings used during the timber sale. However, we anticipate that there will be some seeding failures. Therefore, treatment will include re-seeding of temporary roads, and landings where initial seeding attempts failed and seeding specified roads, which have been closed to vehicle access. The seed mixture will contain a mixture of native species.

Roads designated for closure and wildlife forage seeding are displayed in the Roads and Facilities section, Figure Roads-1, of Chapter 3.

Needs/Costs

The direct cost for hand seeding is \$500 per acre.

The following shows the adjustments to the direct cost for a 4 percent inflation rate for 2 years (the time at which seeding will occur) and for overhead (OH) costs.

$$\$500/\text{acre} \times 1.04^2 = \$540.80/\text{acre}$$

$$\$540.80/\text{acre} \times 1.5303 \text{ (OH)} = \$827.59/\text{acre}$$

Approximately 35 acres will be treated under most of the action alternatives.

Seeding of roads will cost \$28,980.00 (\$828/acre X 35 acres)

Table Appendix F-4
Knutsen-Vandenberg (KV) Direct Cost Breakdown Table

Project	Personnel (Includes Contract Preparation and Administration)	Subsistence	Travel (FW, Helicopter, Boat, Vehicle, Other)	Other (Facilities, Equipment, Contracts, etc.)	Total Expenses
Essential Reforestation					
Natural Regeneration Surveys (3 & 5 Years)	\$4.88/acre ^{1/2/}	\$ 0.48	\$ 0.64	\$2.50 ^{3/}	\$8.50/acre
Cone Collection	\$184.00/bushel	\$ 0.00	\$13.00	\$53.00	\$250.00/bushel
Planting	\$74.00/acre	\$ 0.00	\$53.00 ^{4/}	\$223.00 ^{5/}	\$350.00/acre
Plantation Survival Surveys (1 & 3 Years)	\$8.00/acre	\$ 0.48	\$4.02	\$1.50	\$14.00/acre
Mitigation					
Slide Stabilization and 2-year Monitorization	\$131.00/acre \$333.00/slide	\$0.00 \$125.00	\$150.00 \$125.00	\$269.00 \$42.00	\$550.00/acre \$500.00/slide
Road Seeding	\$318.00/acre		\$32.00	\$150.00	\$500.00/acre

Source: Trulock 1997.

1/ A 15 percent facilities support charge not included in overhead calculations has been assigned here.

2/ Includes office and field work associated with surveys, plus database updates and record keeping.

3/ The prorated cost of analysis of aerial photography necessary for the regeneration process and database updates.

4/ Includes the cost of personnel and seedling transportation.

5/ Includes the cost of the planting contract, seedlings, coolers, and other facilities.

F Appendix

Table Appendix F-5
Proposed Essential Reforestation—Alternative 2

Unit Number	Unit Acres	Harvest Acres	Planting	Survival Surveys	Regeneration Survey Acres
1	44.8	24.8			24.8
5	48.5	0.0			0.0
9	14.2	9.4			9.4
10	51.3	30.9			30.9
17	10.3	9.0	1	1	9.0
22	48.2	28.7			28.7
24	14.3	8.8			8.8
29	57.9	33.8			33.8
31	7.6	6.8			6.8
32	10.2	10.1			10.1
33	14.6	8.0			8.0
34	29.1	9.4			9.4
36	7.2	0.0			0.0
37	5.1	3.5	1	1	3.5
39	21.3	12.1	2	2	12.1
40	18.5	9.6			9.6
41	22.7	13.5			13.5
42	32.0	15.9			15.9
43	47.7	22.8			22.8
44	11.4	10.6			10.6
45	66.6	31.0			31.0
46	23.1	13.4			13.4
47	21.3	13.8			13.8

Table Appendix F-5 (cont.)

Proposed Essential Reforestation—Alternative 2

Unit Number	Unit Acres	Harvest Acres	Planting	Survival Surveys	Regeneration Survey Acres
55	35.3	5.5			5.5
56	30.6	12.3	2	2	12.3
57	69.0	43.9			43.9
59	35.6	35.6			35.6
60	51.8	27.8			27.8
65	26.5	15.7			15.7
66	62.0	36.4			36.4
67	63.4	46.1	4	4	46.1
68	20.3	10.8	2	2	10.8
69	65.5	36.2			36.2
71	42.5	32.7			32.7
72	37.1	25.8			25.8
75	59.5	59.5			59.5
76	36.5	29.9			29.9
80	81.6	51.8	3	3	51.8
81	27.0	10.6			10.6
82	35.4	26.9			26.9
83	33.3	25.7			25.7
86	25.0	19.3	5	5	19.3
87	28.0	23.0	5	5	23.0
90	124.7	86.4			86.4
113	16.7	12.4			12.4
118	48.6	48.6			48.6

F Appendix

Table Appendix F-5 (cont.)
Proposed Essential Reforestation—Alternative 2

Unit Number	Unit Acres	Harvest Acres	Planting	Survival Surveys	Regeneration Survey Acres
119	21.2	16.4	3	3	16.4
120	42.8	38.8			38.8
121	66.0	51.5			51.5
124	45.7	16.4			16.4
125	52.6	37.8	5	5	37.8
126	44.4	37.2	5	5	37.2
127	67.1	42.4			42.4
128	86.1	68.4			68.4
133	37.5	21.4	3	3	21.4
134	24.4	22.2			22.2
135	87.1	16.2	2	2	16.2
136	35.2	27.0	2	2	27.0
137	17.6	17.6	4	4	17.6
138	34.7	26.6			26.6
139	34.4	34.4	4	4	34.4
140	79.4	56.5			56.5
141	63.8	45.7			45.7
143	87.6	53.4			53.4
145	60.2	27.6			27.6
153	37.2	37.2			37.2
165	32.8	8.7			8.7
166	63.9	25.3			25.3
168	34.6	19.6			19.6

Table Appendix F-5 (cont.)

Proposed Essential Reforestation—Alternative 2

Unit Number	Unit Acres	Harvest Acres	Planting	Survival Surveys	Regeneration Survey Acres
171	122.7	85.4			85.4
172	71.7	64.1			64.1
173	47.4	32.7			32.7
174	32.3	25.3			25.3
175	36.0	25.8			25.8
176	45.4	39.1			39.1
203	85.7	53.2			53.2
209	14.5	11.1			11.1
210	41.4	36.3			36.3
213	23.1	21.8			21.8
214	34.2	22.9			22.9
215	17.3	15.0	2	2	15.0
216	20.8	16.6			16.6
217	25.7	24.7	2	2	24.7
218	15.9	9.8			9.8
219	49.0	41.3	3	3	41.3
220	28.6	20.9	2	2	20.9
221	8.5	7.2			7.2
222	34.7	25.6	3	3	25.6
223	24.4	20.7			20.7
224	57.6	47.8			47.8
226	38.2	31.5			31.5
227	33.9	31.3	2	2	31.3

F Appendix

Table Appendix F-5 (cont.)
Proposed Essential Reforestation—Alternative 2

Unit Number	Unit Acres	Harvest Acres	Planting	Survival Surveys	Regeneration Survey Acres
228	27.1	23.1			23.1
231	35.5	23.7			23.7
232	46.6	35.7			35.7
234	28.5	19.8			19.8
235	15.2	12.4	3	3	12.4
236	63.5	59.6			59.6
237	24.7	20.4			20.4
238	13.2	11.5			11.5
239	11.4	6.3			6.3
240	55.2	43.1			43.1
241	11.4	7.9			7.9
243	14.2	11.1			11.1
244	6.8	6.8			6.8
246	34.5	23.6			23.6
250	20.5	13.9			13.9
318	16.9	16.9	3	3	16.9
Totals	4,174.3	2,843.0	73	73	2,843.0

Source: Trulock 1997.

Table Appendix F-6
Proposed Essential Reforestation—Alternative 3

Unit Number	Unit Acres	Harvest Acres	Planting	Survival Surveys	Regeneration Survey Acres
1	44.8	24.8			24.8
10	51.3	30.9			30.9
11	4.6	3.4			3.4
17	10.3	9.0	1	1	9.0
22	48.2	28.7			28.7
29	57.9	33.8			33.8
32	10.2	10.1			10.1
33	14.6	8.0			8.0
34	29.1	9.4			9.4
36	7.2	0.0			0.0
37	5.1	3.5	1	1	3.5
39	21.3	12.1	2	2	12.1
40	18.5	9.6			9.6
41	22.7	13.5			13.5
42	32.0	15.9			15.9
43	47.7	22.8			22.8
44	11.4	10.6			10.6
55	35.3	5.5			5.5
56	30.6	12.3	2	2	12.3
57	69.0	43.9			43.9
60	51.8	27.8			27.8
66	62.0	36.4			36.4
67	63.4	46.1	4	4	46.1

F Appendix

Table Appendix F-6 (cont.)
Proposed Essential Reforestation—Alternative 3

Unit Number	Unit Acres	Harvest Acres	Planting	Survival Surveys	Regeneration Survey Acres
68	20.3	10.8	2	2	10.8
69	65.5	36.2			36.2
71	42.5	32.7			32.7
72	37.1	25.8			25.8
80	81.6	51.8	3	3	51.8
81	27.0	10.6			10.6
82	35.4	26.9			26.9
113	16.7	12.4			12.4
118	48.6	48.6	3	3	48.6
119	21.2	16.4			16.4
120	42.8	38.8			38.8
121	66.0	51.5			51.5
124	45.7	16.4			16.4
125	52.6	37.8	5	5	37.8
126	44.4	37.2	5	5	37.2
133	37.5	21.4	3	3	21.4
134	24.4	22.2			22.2
141	63.8	45.7			45.7
143	87.6	53.4			53.4
171	122.7	85.4			85.4
173	47.4	32.7			32.7
209	14.5	11.1	2	2	11.1
210	41.4	36.3			36.3

Table Appendix F-6 (cont.)

Proposed Essential Reforestation—Alternative 3

Unit Number	Unit Acres	Harvest Acres	Planting	Survival Surveys	Regeneration Survey Acres
213	23.1	21.8			21.8
215	17.3	15.0	2	2	15.0
219	49.0	41.3	3	3	41.3
220	28.6	20.9	2	2	20.9
224	57.6	47.8			47.8
226	38.2	31.5			31.5
230	58.0	44.9			44.9
231	35.5	23.7			23.7
232	46.6	35.7			35.7
234	28.5	19.8			19.8
235	15.2	12.4	3	3	12.4
236	63.5	59.6			59.6
243	14.2	11.1			11.1
246	34.5	23.6			23.6
250	20.5	13.9			13.9
318	16.9	16.9	3	3	16.9
Totals	2,382.9	1,620.1	46	46	1,620.1

Source: Trulock 1997.

F Appendix

Table Appendix F-7
Proposed Essential Reforestation—Alternative 4

Unit Number	Unit Acres	Harvest Acres	Planting	Survival Surveys	Regeneration Survey Acres
1	44.8	24.8			24.8
10	51.3	30.9			30.9
11	4.6	3.4			3.4
17	10.3	9.0	1	1	9.0
29	57.9	33.8			33.8
39	21.3	12.1	2	2	12.1
40	18.5	9.6			9.6
41	22.7	13.5			13.5
55	35.3	5.5			5.5
56	30.6	12.3	2	2	12.3
57	69.0	43.9			43.9
66	62.0	36.4			36.4
67	63.4	46.1	4	4	46.1
68	20.3	10.8	2	2	10.8
69	65.5	36.2			36.2
71	42.5	32.7			32.7
72	37.1	25.8			25.8
80	81.6	51.8	3	3	51.8
81	27.0	10.6			10.6
82	35.4	26.9			26.9
113	16.7	12.4			12.4
118	48.6	48.6			48.6
119	21.2	16.4	3	3	16.4

Table Appendix F-7 (cont.)

Proposed Essential Reforestation—Alternative 4

Unit Number	Unit Acres	Harvest Acres	Planting	Survival Surveys	Regeneration Survey Acres
120	42.8	38.8			38.8
121	66.0	51.5			51.5
124	45.7	16.4			16.4
141	63.8	45.7			45.7
143	87.6	53.4			53.4
209	14.5	11.1	2	2	11.1
210	41.4	36.3			36.3
213	23.1	21.8			21.8
215	17.3	15.0	2	2	15.0
216	20.8	16.6			16.6
219	49.0	41.3	3	3	41.3
220	28.6	20.9	2	2	20.9
224	57.6	47.8			47.8
226	38.2	31.5			31.5
230	58.0	44.9			44.9
231	35.5	23.7			23.7
232	46.6	35.7			35.7
234	28.5	19.8			19.8
235	15.2	12.4	3	3	12.4
236	63.5	59.6			59.6
243	14.2	11.1			11.1
318	16.9	16.9	3	3	16.9
Totals	1,762.4	1,225.7	32	32	1,225.7

Source: Trulock 1997.

F Appendix

Table Appendix F-8
Proposed Essential Reforestation—Alternative 5

Unit Number	Unit Acres	Harvest Acres	Planting	Survival Surveys	Regeneration Survey Acres
1	44.8	24.8			24.8
10	51.3	30.9			30.9
17	10.3	9.0	1	1	9.0
22	48.2	28.7			28.7
24	14.3	8.8			8.8
40	18.5	9.6			9.6
41	22.7	13.5			13.5
42	32.0	15.9			15.9
55	35.3	5.5			5.5
56	30.6	12.3	2	2	12.3
57	69.0	43.9			43.9
66	62.0	36.4			36.4
67	63.4	46.1	4	4	46.1
68	20.3	10.8	2	2	10.8
69	65.5	36.2			36.2
71	42.5	32.7			32.7
72	37.1	25.8			25.8
88	27.4	13.1			13.1
89	30.4	22.2			22.2
90	124.7	86.4			86.4
213	23.1	21.8			21.8
220	28.6	20.9	2	2	20.9
224	57.6	47.8			47.8
226	38.2	31.5			31.5
230	58.0	44.9			44.9
231	35.5	23.7			23.7
232	46.6	35.7			35.7

Table Appendix F-8 (cont.)

Proposed Essential Reforestation—Alternative 5

Unit Number	Unit Acres	Harvest Acres	Planting	Survival Surveys	Regeneration Survey Acres
234	28.5	19.8			19.8
235	15.2	12.4	3	3	12.4
236	63.5	59.6			59.6
318	16.9	16.9	3	3	16.9
Totals	1,262.0	847.6	17	17	847.6

Source: Trulock 1997.

F Appendix

Table Appendix F-9
Proposed Essential Reforestation—Alternative 6

Unit Number	Unit Acres	Harvest Acres	Planting	Survival Surveys	Regeneration Survey Acres
209	14.5	11.1	2	2	11.1
210	41.4	36.3			36.3
213	23.1	21.8			21.8
215	17.3	15.0	2	2	15.0
219	49.0	41.3	3	3	41.3
220	28.6	20.9	2	2	20.9
224	57.6	47.8			47.8
230	58.0	44.9			44.9
231	35.5	23.7			23.7
232	46.6	35.7			35.7
234	28.5	19.8			19.8
235	15.2	12.4	3	3	12.4
236	63.5	59.6			59.6
Total	478.8	390.3	12	12	390.3

Source: Trulock 1997.

Literature Cited

- DeMeo, T.D. 1992. Forest Plant Association Management Guide: Ketchikan Area, Tongass National Forest. USDA Forest Service, Ketchikan, AK.
- Loggy, W.D. 1974. Landslide inventory of the Harris River drainage. Unpublished report. USDA Forest Service, Tongass National Forest, Ketchikan Area, Ketchikan, Alaska.
- National Forest Management Act (NFMA). 1976. Public Law 94-588, 90 Stat. 2949, as amended; 16 U.S.C. 36 CFR 219.
- USDA Forest Service Handbook 2409.17. Silvicultural Practices Handbook. Chapter 9

~END Appendix F~

Appendix G

Watershed Values Matrix

Appendix A

Table A.1. Summary of the data used in the study.

Wetland Values Matrix

Wetland values are defined here as socioeconomic benefits derived from wetlands functions, goods and services, quantifiable and other. Some of the most important wetland values in southeast Alaska include: wildlife harvest, fish production, habitat for sensitive or endangered plant and animal species, timber harvest, berry and other edible plant harvest, water quality maintenance, flood control, and providing recreation opportunities. Wetland functions are physical attributes of the wetland ecosystem and can be organized as follows:

- Hydro-geomorphic functions: groundwater recharge and discharge, surface hydrologic control, streambank and shoreline maintenance, erosion control, sediment storage, temperature regulation, microclimate control, karst landscape formation, and maintenance of overall landscape diversity.
- Bio-chemical functions: element cycling, maintenance of water chemistry, carbon and nitrogen storage, nutrient export and utilization, and decomposition.
- Biological functions, terrestrial and aquatic: habitat for vascular and non-vascular plants, fish, mammals, gamebirds, non-game birds, invertebrates, primary and secondary productivity, and biological diversity.

The biological significance of a wetland is related to the value of its functions and, at least in part, to the relative scarcity of the wetland type in the landscape. This is especially true in terms of biological diversity on the landscape scale. The relatively scarce fens and estuarine salt marshes in the Sea Level Area have a greater biological significance than the more common bogs and forested wetlands which are widespread throughout the landscape.

The interdisciplinary team, made up of specialists in fisheries, forest, recreation, vegetation, watershed and wildlife management has assigned relative wetland values to the various wetland types found in the Project Area. These wetland values are based upon the social and economic benefits derived from the different types of wetlands, and the relative abundance and location of the wetland types. These wetland values were used in development and analysis of Project alternatives. Wetland values were also considered in making decisions concerning the minimization of development in, or avoidance of wetlands, and the design and implementation of mitigation measures. The value assessment for this project was based upon a number of important social/economic uses of the twelve wetland types identified and mapped in the Project Area. These socioeconomic uses include:

- hunting and trapping (sport and subsistence),
- fishing (commercial, subsistence and sport),
- timber harvest (commercial, fuel-wood and personal use),
- other plant harvest (mushrooms, herbs, berries, etc.),
- Threatened Endangered and Sensitive (TE&S) species habitat,
- water quality maintenance (the importance of wetlands in filtering and/or breaking down physical, chemical, and biological pollutants),
- flood control (the effectiveness in moderation of high water flows), and
- recreation opportunities (the amount of outdoor recreation which takes place in wetlands).

This list of social values is intended to represent some of the most socially and economically significant values within the Project Area, but is by no means intended to represent all the possible social and economic values and benefits derived from these wetlands.

High value has been assigned to several wetland types. These high value wetlands include the estuarine meadows, lakes and ponds, tall sedge fens, and the riparian forest. These wetlands serve as important habitat for anadromous and resident fish; they provide important wildlife habitat, including Sitka black-tailed deer, black bear, martin, mink and other fur bearers; they provide important elements of streambank and shoreline maintenance; they serve to directly regulate stream flow and water quality. A number of unique or sensitive plant species are typically concentrated in these wetland types. The riparian forests are typically have a very high timber site productivity and support high volume Sitka spruce stands. Typically these are high use subsistence areas. These wetland types are relatively scarce and scattered throughout the Project Area. Maintenance of their important functions and values are a high priority for the management of the Project Area.

Medium-value wetlands include the alpine tall sedge fens, alder/salmonberry shrublands, short sedge muskeg and Sphagnum peat bogs. These wetlands serve as seasonally important habitat for terrestrial wildlife; habitat for unique plant and animal species; groundwater recharge and discharge; and maintenance of landscape diversity. Sphagnum peat bogs and the short sedge muskeg are important berry harvesting areas. They generally are locally common, but are typically concentrated on certain parts of the landscape. Several of these wetland types are an open terrain that provide enjoyable walking and scenic views.

Low-value wetlands include those types dominated by scrub-shrub forest or low-productivity forest-land. These wetland types include the alpine shrubland muskeg, forested wetlands, scrub-shrub muskeg and subalpine forested wetlands. These wetland types cover extensive areas of the Project Area. They generally provide only marginal habitat for terrestrial wildlife and aquatic organisms. They have some value for groundwater recharge and maintenance of stream-flows. Generally, the timber site productivity of these forested wetlands are low, and they often support noncommercial or only marginally commercial forest stands. Usually the vegetation grows too thick and is to difficult to negotiate to provide an enjoyable recreation experience.

The Wetland Values Matrix table displays a matrix of the important values of various wetland types found in the Sea Level Project Area, Ketchikan Ranger District. This matrix was used by the Sea Level Interdisciplinary Team (IDT) to combine the specific wetland values into an overall total wetland value for each wetland type. The overall value was not necessarily a summation of specific values, but is based upon a relative average of specific values. No specific value(s) were given higher weight than any other value(s). This list of social/economic values is intended to represent some of the most socially and economically significant values within the Project Area, but is by no means intended to represent all the possible social and economic values and benefits derived from these wetlands. The various wetland types found in the Area are displayed in the first column. Specific wetland values for each important socioeconomic use are displayed in columns 2-9. The total value of the particular wetland type is a summary of the specific values and is displayed in column 10.

Table Wetland Values Matrix-1
Wetland Type and Associated Values

Wetland Type	Wetland Values								
	Hunting and Trapping	Fishing	Timber Harvest	Other Plant Harvest	TE&S Habitat	Water Quality Maintenance	Flood Control	Recreation Opportunities	Total Value
Alpine Shrubland Muskeg	Low	Low	NA	High	Low	Low	Low	Low	Low
Alpine Sedge Fen	Medium	Low	NA	Low	High	Low	Medium	Medium	Medium
Alder Salmonberry Shrublands	Low	Low	NA	High	Low	Medium	Medium	Low	Medium
Estuarine Meadow	High	High	NA	High	Low	Medium	High	High	High
Short Sedge Muskeg	Medium	Low	NA	Medium	Medium	Medium	Medium	Medium	Medium
Forested Wetland	Low	Low	Medium	Medium	Low	Low	Low	Low	Low
Sphagnum Peat Bog	Low	Low	NA	High	Medium	Medium	Medium	High	Medium
Tall Sedge Fen	High	Medium	NA	Medium	High	High	High	High	High
Scrub-Shrub Muskeg	Low	Low	NA	Medium	Low	Low	Low	Low	Low
Riparian Forest	High	High	High	High	High	High	High	High	High
Subalpine Forested Wetland	Low	Low	Low	Low	Low	Low	Low	Low	Low
Lakes and Ponds	High	High	NA	Low	Low	High	High	High	High

Appendix H

Part 1 - Unit Cards

Part 2 - Road Cards

Algorithm 14

Algorithm 14: The algorithm for the computation of the h -th order approximation of the solution of the initial value problem (1.1) with the initial condition (1.2) using the Runge-Kutta method of order h .

Input: $t_0, y_0, h, \tau, \epsilon$

Output: $y_h(t)$

1. $t \leftarrow t_0$

2. $y \leftarrow y_0$

3. $k_1 \leftarrow f(t, y)$

4. $k_2 \leftarrow f(t + \tau/2, y + \tau/2 k_1)$

5. $k_3 \leftarrow f(t + \tau, y + \tau k_2)$

6. $k_4 \leftarrow f(t + \tau, y + \tau k_3)$

7. $y \leftarrow y + \tau (k_1 + 2k_2 + 2k_3 + k_4)/6$

Part 1 - Unit Cards



Unit Cards

Unit cards have been developed for each harvest unit and associated road proposed for the Sea Level Draft Environmental Impact Statement (EIS). These cards are intended to display site-specific information, enabling the public to more fully understand harvest implications. They also serve as a mechanism to pass on information gathered during office reconnaissance of the proposed harvest units to Forest Service field personnel, as well as to provide a vehicle for field reconnaissance observations to be routed back to the Interdisciplinary Team (IDT) for consideration.

The unit cards consist of two parts: (1) a detailed description of the unit, and (2) a schematic map. The map displays the proposed unit and associated roads in the center of the page. Other features shown include: stream-courses, existing roads, previously harvested areas, contour lines, lakes, saltwater, and eagle nests.

The reverse side of the card provides a physical description of the unit, as well as identification of resource concerns which must be considered during implementation of harvest. The physical description includes the location, planned acreage, estimated sawlog plus utility volume, silvicultural system, predominant forest type, aspect, and a breakdown by volume class, elevation range, and soil mass movement index. Resource considerations are identified for soils, timber, engineering, fisheries/watersheds, wildlife, recreation, visuals, lands, cultural resources, and geology.

Unit Data Card - Sea Level Draft EIS

Unit Number:	1	Planned Acres:	44.8	Silvicultural Systems:	CC, DEF	Alternatives:	2, 3, 4, 5
LUD:	ML	Harvest Acres:	24.8	Management Area:	K35	VCU Number:	7530
Primary Watershed Code:	OOOZ	Primary WAA Number:	405	Quad:	ktnb4nw	Photo:	1390-82
Number of Settings:	10	Logging System:	RS	Total Estimated Harvest Volume (MBF):		737.8	

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	44.8	Cedar:	0.0	Mixed Hem/Spr:	0.0	Nonforested:	0.0
Site Productivity Classes	Low:	0.0	Medium:	3.5	High:	41.3	Primary Aspect:			E
Volume Strata	Low:	0.0	Medium:	3.5	High:	41.3	Noncommercial:	0.0		
Visuals	Seen:	12.5	Not Seen:	0.0	Primary ROS Code:					RM
VQOs	PR:	12.5	MM:	0.0	M:	0.0	P:	0.0	R:	0.0
VAC Rating	Low:	32.2	Intermediate:	12.7	High:	0.0	Roadless:			0.0
Mass Movement Index	Low:	3.5	Medium:	12.6	High:	28.7	Very High:	0.0	Slopes Greater Than 72%:	0.1
Wetland Type	Forested Wetland:		9.8		Scrub-Shrub Muskeg:		2.6			
TLMP High Value Marten Habitat	41									

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS:

No Concerns

FISH/WATERSHED:

Class I MC2 northeast: Greater of 100 foot or RMA buffer (top of sideslope) required.
Class III HC5 northeast: Sideslope Standard & Guideline buffer (top of V-notch) required.
Class III HC5 & HC6 southeast: Sideslope Standard & Guideline buffer (top of V-notch) required.

GEOLOGY:

High landslide potential. See Soils for mitigation measures.

LANDS:

No concerns.

RECREATION/VISUALS:

No Concerns

SILVICULTURE:

Highly productive. Clearcut harvest 24.8 acres. Stand should regenerate naturally. Harvest deferred on 20 acres to meet Marten standards (see wildlife). CT 10/22/97

SOILS:

Unit contains high landslide potential (MMI=3) soils (BMP 13.5). About 15 acres of these soils have been placed in deferral areas (BMP 13.1). Forested wetlands in the north and south parts of unit. Avoid locating roads in these wetlands (BMP 12.5). Use overlay road construction with minimal side ditching where practicable, to minimize the disruption of subsurface drainage (BMP 14.3). Provide at least partial log suspension when yarding these wetland and high landslide potential areas (BMP 13.9).

TIMBER:

Unit designed for running skyline yarding method. Verify all landings and temporary road locations during layout phase.

WILDLIFE:

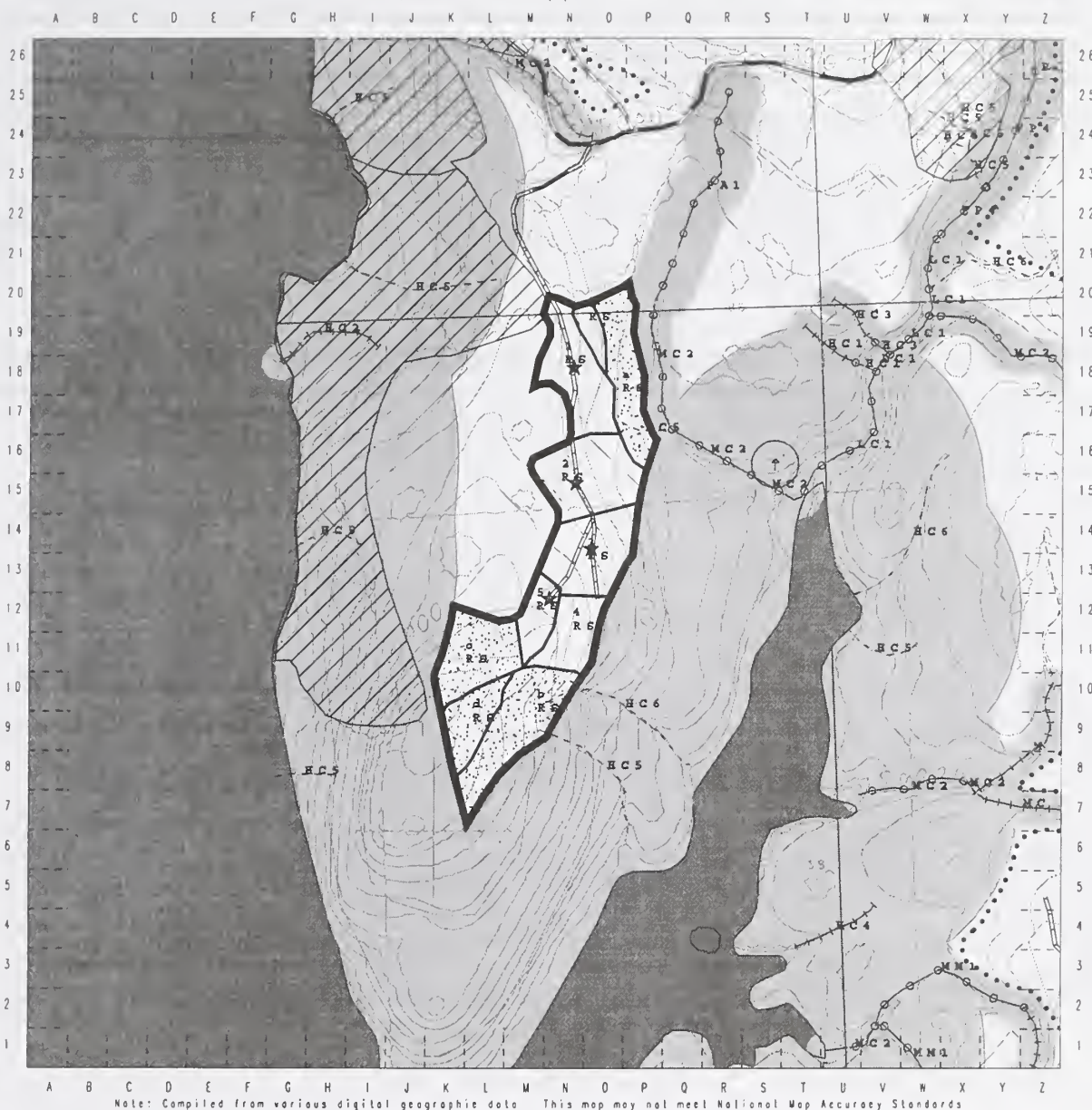
Unit is within 0.5 miles of 2 bald eagle nests. Follow Interagency Agreement. Blasting prohibited within 0.5 mile of nests March 1 through May 31. If nest is determined active, blasting prohibited within 0.5 mile of nest June 1 through August 31.
Maintain 1000 foot beach/estuary buffer.
Marten guidelines apply: maintain 10-20% of canopy, average 4 large trees/acre (20-30"+), average 3 snags per acre, average 3 pieces downed logs/acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 1

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, /tallies/ref/library/gis/sealevel6/draftcard.draftcard.mxd



Note: Compiled from various digital geographic data. This map may not meet National Map Accuracy Standards.

<ul style="list-style-type: none"> Class 1 Stream Class 2 Stream Class 3 Stream Section Line Planning Roads Unit boundary Setting Line Contour or Ortho line Other Sealevel 	<ul style="list-style-type: none"> Stream, Beach or Estuary Buffer Private Land Riparian Soil Buffer Body of Water Prior Harvest Deferred from Harvest Mass Movement Index 4 Soil 	<ul style="list-style-type: none"> Low Volume - 0 Medium Volume - 1 High Volume - 24 Unknown Volume - 0 Total Acres - 45 Potential WBF - 858 Quarter Quad - klnb4nw VCU Number - 7530 Photo Number - 1390082 Alternative Pattern - 23450 * Landing
--	--	---

LOGGING SYSTEMS Abbrev.

RS Running Skyline
HE Helicopter
HL High Lead
SL Sloek Line
SH Shovel Yarding

Projection - Stateplane



Eagle Nest



Unit Data Card - Sea Level Draft EIS

Unit Number:	2	Planned Acres:	20.1	Silvicultural System:	DEF	Alternative:	none
LUD:	ML	Harvest Acres:	0	Management Area:	K35	VCU Number:	7530
Primary Watershed Code:	OOOZ	Primary WAA Number:	405	Quad:	ktnb4nw	Photo:	1390-83
Number of Settings:	0	Logging System:	NA	Total Estimated Harvest Volume (MBF):			0

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	19.0	Cedar:	0.0	Mixed Hem/Spr:	1.1	Nonforested:	0.0
Site Productivity Classes	Low:	0.0	Medium:	17.4	High:	2.8	Primary Aspect: S			
Volume Strata	Low:	17.1	Medium:	2.0	High:	0.0	Noncommercial:	1.1		
Visuals	Seen:	20.1	Not Seen:	0.0					Primary ROS Code:	RM
VQOs	PR:	0.0	MM:	0.0	M:	0.0	P:	0.0	R:	0.0
VAC Rating	Low:	9.8	Intermediate:	10.4	High:	0.0	Roadless: 0.0			
Mass Movement Index	Low:	18.3	Medium:	0.7	High:	1.1	Very High:	0.0	Slopes Greater Than 72%:	0.0
Wetland Type	Forested Wetland:		17.0	Short Sedge Muskeg:			0.5			
TLMP High Value Marten Habitat:	0.0									

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/03/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS:

No Concerns

FISH/WATERSHED:

No concerns

GEOLOGY:

No concerns.

LANDS:

No concerns.

RECREATION/VISUALS:

SILVICULTURE:

Sensitive plant near south end of unit. See resource report.

SOILS:

Most of this unit consists of forested wetland (BMP 12.5). Recommend that a low impact yarding system, which provides at least partial log suspension be used on this site (BMP 13.9). Locate road to the west, out of this wetland, if possible (BMP 14.2). Use overlay road construction with minimal side ditching, where practical, to minimize the disruption of subsurface drainage (BMP 14.3). Avoid placing fill material on these wetlands (BMP 14.12).

TIMBER:

WILDLIFE:

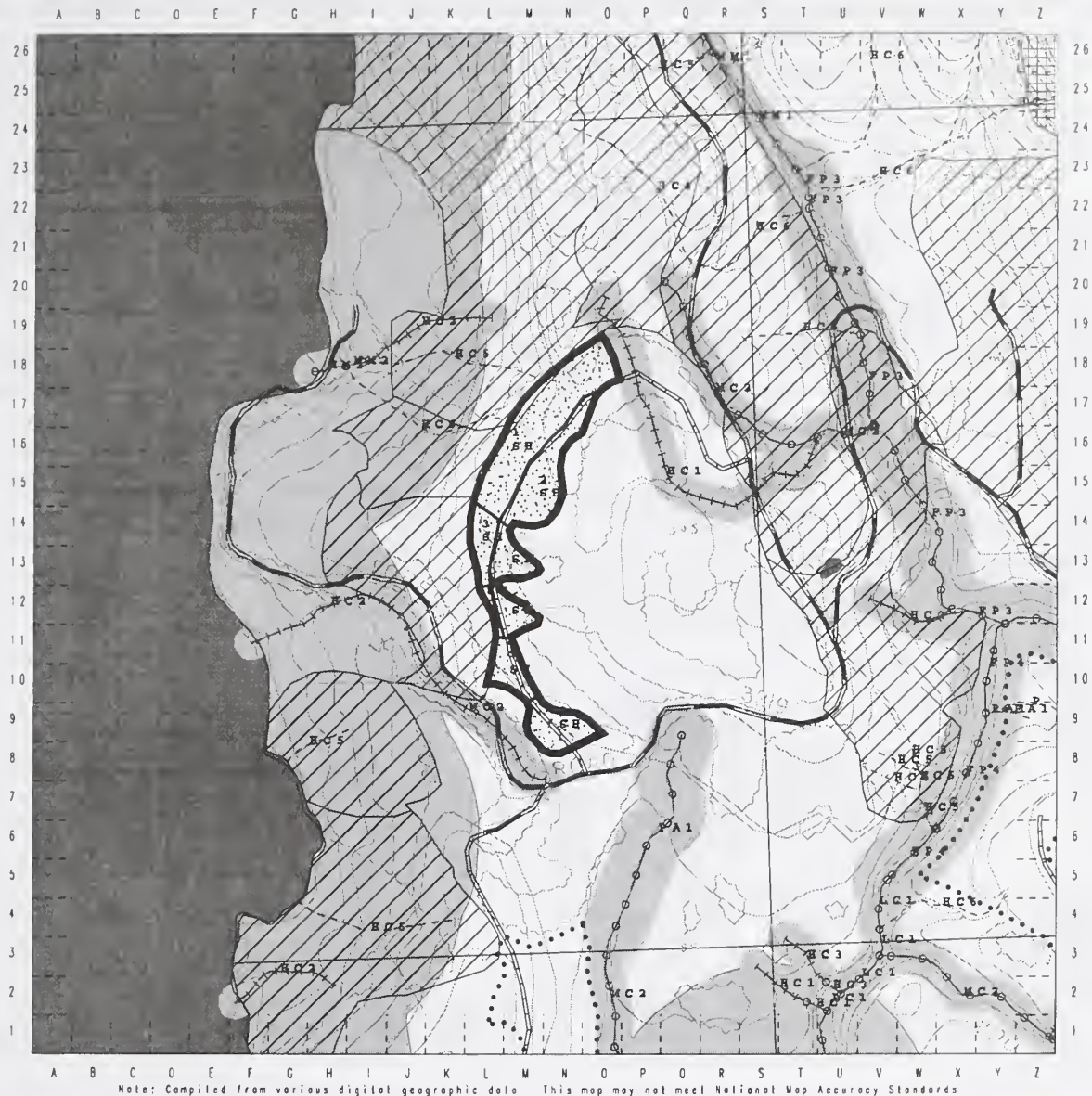
No wildlife mitigation anticipated for this unit.

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 2

Upscale 1:12000 (5 inch to mile)

Created 11-17-1997, J:\elilec\ref\library\gis\eco\er6\draftcard\draftcard.mxd



<p>Class 1 Stream</p> <p>Class 2 Stream</p> <p>Class 3 Stream</p> <p>Section Line</p> <p>Planning Roads</p> <p>Unit Boundary</p> <p>Settling Line</p> <p>Contour or Ortho line</p> <p>Other Sealevel</p>	<p>Stream, Beach or Estuary Buffer</p> <p>Private Land</p> <p>Riparian Soil Buffer</p> <p>Body of Water</p> <p>Prior Harvest</p> <p>Deferred from Harvest</p> <p>Mass Movement Index & Soil</p>	<p>Low Volume - 0</p> <p>Medium Volume - 0</p> <p>High Volume - 0</p> <p>Unknown Volume - 0</p> <p>Total Acres - 20</p> <p>Potential WBF - 0</p> <p>Quarter Quad - kinkline</p> <p>VCU Number - 7530</p> <p>Photo Number - 1390083</p> <p>Alternative Pattern - 00000</p> <p>* Loading</p>
--	---	--

LOGGING SYSTEMS Abbrev.

RS Running Skyline

HE Helicopter

HL High Lead

SL Slack Line

SH Shovel Yarding

Projection - Stoleplane

Feet

0 526 1056 1582 2112

Eagle Nest

Unit Data Card - Sea Level Draft EIS

Unit Number:	5	Planned Acres:	48.5	Silvicultural System:	DEF	Alternatives:	2, 3
LUD:	TP	Harvest Acres:	0.0	Management Area:	K35	VCU Number:	7530
Primary Watershed Code:	E76A	Primary WAA Number:	405	Quad:	ktnb4nw	Photo:	1390-82
Number of Settings:	9	Logging System:	NA	Total Estimated Harvest Volume (MBF): 0.0			

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	11.5	Cedar:	0.0	Mixed Hem/Spr:	37.0	Nonforested:	0.0
Site Productivity Classes	Low:	0.0	Medium:	48.4	High:	0.1	Primary Aspect: NNW			
Volume Strata	Low:	45.3	Medium:	3.2	High:	0.0	Noncommercial:	0.0		
Visuals	Seen:	48.5	Not Seen:	0.0					Primary ROS Code:	RM
VQOs	PR:	0.0	MM:	0.0	M:	0.0	P:	0.0	R:	0.0
VAC Rating	Low:	0.0	Intermediate:	48.5	High:	0.0	Roadless: 0.0			
Mass Movement Index	Low:	48.4	Medium:	0.0	High:	0.1	Very High:	0.0	Slopes Greater Than 72%:	0.0
Wetland Type	Forested Wetland:		10.9							
TLMP High Value Marten Habitat	0.0									

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS:

No concerns.

FISH/WATERSHED:

Class I FP4 northeast to west: Greater of 130 foot or floodplain RMA buffer required.

Class I AF1 northeast: Greater of 140 foot or alluvial fan RMA buffer required.

Class III HC2 northeast: Sideslope S&G buffer (top of V-notch), split yard or full suspension required.

Class IV HC1 center north: Split yard or partial suspension required.

Class III PA1 west: Avoid this area.

Class IV HC6 south: Split yard or partial suspension required.

Class III HC6 south: Avoid this area.

Class I MC2 south: Greater of 100 foot or RMA buffer (top of sideslope) required.

Class II (direct) MC2 south: Greater of 100 foot or RMA buffer (top of sideslope) required.

GEOLOGY:

Area is underlain by erodible volcanic ash and cinder deposits. Minimize cut slopes and other activities that expose subsoil material.

LANDS:

No concerns.

RECREATION/VISUALS:

SILVICULTURE:

SOILS:

The south part of this unit contains forested wetlands (BMP 12.5). At least partial log suspension should be provided when yarding this area (BMP 13.9). Avoid locating roads on these wetlands, to the extent possible (BMP 14.2). If roads are constructed on wetlands, use overlay construction with minimal side-ditching where practicable, to minimize the disruption of subsurface drainage (BMPs 12.5 and 14.3). These wetlands should not be used as disposal sites for waste material (BMP 14.12).

TIMBER:

WILDLIFE:

Southwest portion of the unit is within 0.5 miles of bald eagle nest. Follow Interagency Agreement. Blasting prohibited within 0.5 mile of nest March 1 through May 31. If nest is determined active, blasting prohibited within 0.5 mile of nest June 1 through August 31.

Unit is within wildlife habitat connecting corridor.

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 5

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, /fullsize/rel/library/gis/sealevel/draftcard/draftcard.mxd



Note: Compiled from various digital geographic data. This map may not meet National Map Accuracy Standards



Unit Data Card—Brand X Timber Sale (Formally Sea Level Draft EIS)

Unit: 6 Unit Ac. 34
Harvest Ac: 28 Quad: KTNB4NW Mgt. Area: K35
Deferred Ac. 6

Photo: 1390-82

Timber Sale: Brand X Aspect: Flat LUD: Timber Production VCU: 753

Elevation: Between 100 and 180 feet

TTRA Buffer Certification: _____

Approved: _____

District Ranger (Jimmy J. DeHerrera)

Date _____

CULTURAL RESOURCES:

No concerns for cultural resources . rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS:

Realign 400 feet new construction, 2000 feet of reconstruction and remove and replace log stringer bridge.
Timing for log stringer bridge is June 15 through August 1st.

FISH/WATER

Stream 1a -upper (PA5) Class II TTRA: 100 foot no cut buffer required (B6.5(a)).
Stream 2a (MC2) Class II TTRA: 100 foot no cut buffer required (B6.5(a)).
Stream 4a -lower (MC2) Class II TTRA: 100 foot no cut buffer required (B6.5 (a)).
Stream 1a -lower (MM1) Class II TTRA: 120 foot no cut buffer required (B6.5(a)).
Stream 3b HC6 Class III: Slope-break no cut buffer required (B6.5(b)).
Stream 4b- upper MC2 Class III: Slope-break no cut buffer required (B6.5(b)).

GEOLOGY:

This area is underlain by deposits of erodible volcanic ash and cinder. These deposits are exposed in numerous places along streambanks adjacent to the unit. Minimize the amount of cutslopes and other ground disturbance that takes place.

LANDS:

Parts of this unit are located within guyline circle of USGS LORAN towers. Will need to mitigate logging operations in this unit.

RECREATION/VISUALS:

This unit will not affect any existing or planned recreation site or place. This unit will not be visible from saltwater; meets a Maximum Modification VQO.

SILVICULTURE:

Harvest 28 acres using a clearcut with reserves system, leave approximately 4-6 acres of leave islands or peninsulas. Prescription will be designed to harvest any trees severely infected with hemlock dwarf mistletoe from the leave areas. Leave areas should range in size from 1/2 acres to 2 acres in size. Natural regeneration should be adequate.

SOILS:

The eastern part of this unit includes forested wetlands (BMP 12.5). Provide at least partial log suspension when yarding on these wetlands to minimize disruption of wetland functions (BMP 13.9). Attempt to locate the road to the east of these wetlands, if possible (BMP 14.2). Use overlay road construction on wetlands with minimal side ditching, where practicable, to minimize the disruption of subsurface drainage (BMPs 12.5 and 14.3). Avoid the use of these wetlands as disposal sties for waste material (BMP 14.12).

TIMBER:

This unit will be shovel logged, with 2800 feet of temporary road.

WILDLIFE:

Unit is within 0.5 miles of bald eagle nest. Follow Interagency Agreement. Blasting prohibited within 0.5 mile of nests March 1 through May 31. If nest is determined active, blasting prohibited within 0.5 mile of nest June 1 through August 31. Maintain 1000 foot beach/estuary buffer.

**NO MAP AVAILABLE
PAGE LEFT BLANK INTENTIONALLY**

Unit Data Card - Sea Level Draft EIS

Unit Number:	9	Planned Acres:	14.2	Silvicultural Systems:	CC, DEF	Alternative:	2
LUD:	TP	Harvest Acres:	9.4	Management Area:	K35	VCU Number:	7530
Primary Watershed Code:	E75A	Primary WAA Number:	405	Quad:	ktnb4nw	Photo:	1390-81
Number of Settings:	2	Logging System:	RS	Total Estimated Harvest Volume (MBF):		232.7	

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	0.0	Cedar:	0.0	Mixed Hem/Spr:	14.2	Nonforested:	0.0
Site Productivity Classes	Low:	0.0	Medium:	14.2	High:	0.0	Primary Aspect: WNW			
Volume Strata	Low:	14.2	Medium:	0.0	High:	0.0	Noncommercial:	0.0		
Visuals	Seen:	0.0	Not Seen:	14.2	Primary ROS Code: RM					
VQOs	PR:	0.0	MM:	14.2	M:	0.0	P:	0.0	R:	0.0
VAC Rating	Low:	1.3	Intermediate:	0.1	High:	12.9	Roadless: 0.0			
Mass Movement Index	Low:	14.2	Medium:	0.0	High:	0.0	Very High:	0.0	Slopes Greater Than 72%:	0.0
Wetland Type	None									
TLMP High Value Marten Habitat	0									

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS: No Concerns

FISH/WATERSHED:

Class II (direct) MC2 east to north: Greater of 100 foot or RMA (top of sideslope) buffer required.

Class I MM1 south: Greater of 120 foot or RMA buffer required.

GEOLOGY:

Area is underlain by erodible volcanic ash and cinder. These deposits are exposed in places along streambanks adjacent to the unit. Avoid or minimize cut-slopes or other ground disturbing activities in this unit.

LANDS:

No concerns.

RECREATION/VISUALS:

No Concerns

SILVICULTURE:

Moderately low productivity. Clearcut harvest 9 acres. Stand should regenerate naturally. Harvest deferred on 5 acres to meet Marten standards (see wildlife). CT 10/22/97

SOILS:

No concerns.

TIMBER:

Planned logging system design for this unit is Running Skyline. Confirm final road and landing locations

WILDLIFE:

Unit is within 0.5 miles of bald eagle nest. Follow Interagency Agreement. Blasting prohibited within 0.5 mile of nest March 1 through May 31. If nest is determined active, blasting prohibited within 0.5 mile of nest June 1 through August 31.

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 9

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, /s:/files/ref/library/gis/sealevel/draftcard/draftcard.mxd



Note: Compiled from various digital geographic data. This map may not meet National Map Accuracy Standards



Unit Data Card - Sea Level Draft EIS

Unit Number:	10	Planned Acres:	51.3	Silvicultural Systems:	CC, DEF	Alternatives:	2, 3, 4, 5
LUD:	TP	Harvest Acres:	30.9	Management Area:	K35	VCU Number:	7530
Primary Watershed Code:	E77A	Primary WAA Number:	405	Quad:	ktnb4nw	Photo:	1390-108
Number of Settings:	11	Logging System:	RS	Total Estimated Harvest Volume (MBF):		767.8	

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	51.3	Cedar:	0.0	Mixed Hem/Spr:	0.0	Nonforested:	0.0
Site Productivity Classes	Low:	0.0	Medium:	51.3	High:	0.0	Primary Aspect: SSE			
Volume Strata	Low:	50.5	Medium:	0.8	High:	0.0	Noncommercial:	0.0		
Visuals	Seen:	0.0	Not Seen:	30.9					Primary ROS Code:	RM
VQOs	PR:	0.0	MM:	30.9	M:	0.0	P:	0.0	R:	0.0
VAC Rating	Low:	0.0	Intermediate:	16.5	High:	34.9	Roadless: 0.0			
Mass Movement Index	Low:	3.8	Medium:	47.5	High:	0.0	Very High:	0.0	Slopes Greater Than 72%:	0.0
Wetland Type	Forested Wetland:		28.3	Short Sedge Muskeg:		0.3	Scrub-Shrub Muskeg: 1.3			
TLMP High Value Marten Habitat	0									

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS: No Concerns

FISH/WATERSHED:

Class II (non-direct) PA2 south: 85 foot S&G buffer required.

Class II (non-direct) PA1 southwest: 85 foot S&G buffer required.

Class II (non-direct) HC1 center to west: Greater of 100 foot or RMA (top of V-notch) buffer required.

GEOLOGY:

No concerns.

LANDS:

No concerns.

RECREATION/VISUALS:

No Concerns

SILVICULTURE:

Moderately low productivity. Clearcut harvest 31 acres. Stand should regenerate naturally. Harvest deferred on 20 to minimize wetland concerns. This stand has Sensitive Plant concerns, specifically *Platanthera orbicula*, these plants are located on the proposed road leading to the unit, some road realignment may be needed, see resource report. CT 10/22/97

SOILS:

Much of the southern part of this unit consists of forested wetland (BMP 12.5). At least partial log suspension should be provided when yarding this area (BMP 13.9). The planned road location avoids these wetland to extent possible (BMP 14.2). Use overlay road construction on these wetlands with minimal side ditching, where practicable, to minimize the disruption of subsurface drainage (BMPs 12.5 and 14.3).

TIMBER:

Planned logging system design for this unit is Running Skyline. Confirm final road and landing locations.

WILDLIFE:

No wildlife mitigation anticipated for this unit.

Unit Data Card - Sea Level Draft EIS

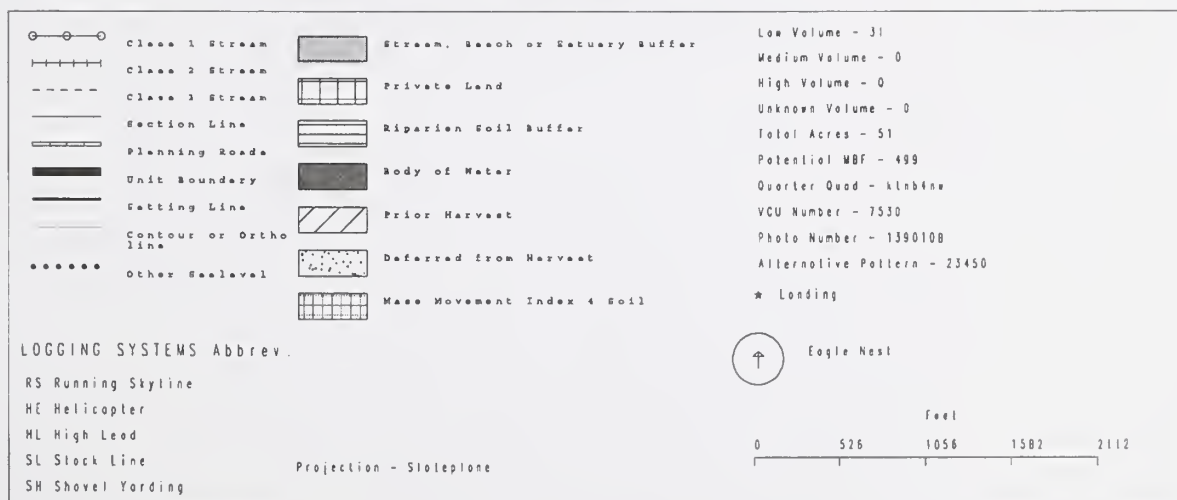
Sealevel Study Area Unit Schematic - Draft Unit 10

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, //alilua/rel/library/gis/sealevel/draftcard/draftcard.mxd



Note: Compiled from various digital geographic data. This map may not meet National Map Accuracy Standards



Unit Data Card - Sea Level Draft EIS

Unit Number:	11	Planned Acres:	4.6	Silvicultural System:	CC	In Alternatives:	3, 4
LUD:	TP	Harvest Acres:	4.6	Management Area:	K35	VCU Number:	0
Primary Watershed Code:	E77A	Primary WAA Number:	405	Quad:	ktnb4nw	Photo:	1390-108
Number of Settings:	2	Logging System:	RS	Total Estimated Harvest Volume (MBF):	101.4		

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	3.4	Cedar:	0.0	Mixed Hem/Spr:	1.2	Nonforested:	0.0	
Site Productivity Classes	Low:	0.0	Medium:	4.6	High:	0.0	Primary Aspect:				E
Volume Strata	Low:	0.0	Medium:	3.4	High:	0.0	Noncommercial:	1.2			
Visuals	Seen:	0.0	Not Seen:	3.4	Primary ROS Code:						RM
VQOs	PR:	0.0	MM:	3.4	M:	0.0	P:	0.0	R:	0.0	
VAC Rating	Low:	0.0	Intermediate:	4.6	High:	0.0	Roadless:				0.0
Mass Movement Index	Low:	4.6	Medium:	0.0	High:	0.0	Very High:	0.0	Slopes Greater Than 72%:	0.0	
Wetland Type			Forested Wetland:	0.2							
TLMP High Value Marten Habitat	0										

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS: No Concerns

FISH/WATERSHED:

Class III HCl south: Sideslope S&G buffer to form unit boundary.

GEOLOGY:

No concerns.

LANDS:

No concerns.

RECREATION/VISUALS:

No Concerns

SILVICULTURE:

Moderately productive. Clearcut harvest 4 acres. Stand should regenerate naturally. CT 10/22/97

SOILS:

A small area of forested wetlands is located in the west-central part of this unit (BMP 12.5). Utilize a logging system that provides at least partial log suspension when yarding this area (BMP 13.9). The planned road has been located to avoid this wetland area (BMP 14.2).

TIMBER:

Planned logging system design for this unit is Running Skyline. Confirm final road and landing locations.

WILDLIFE:

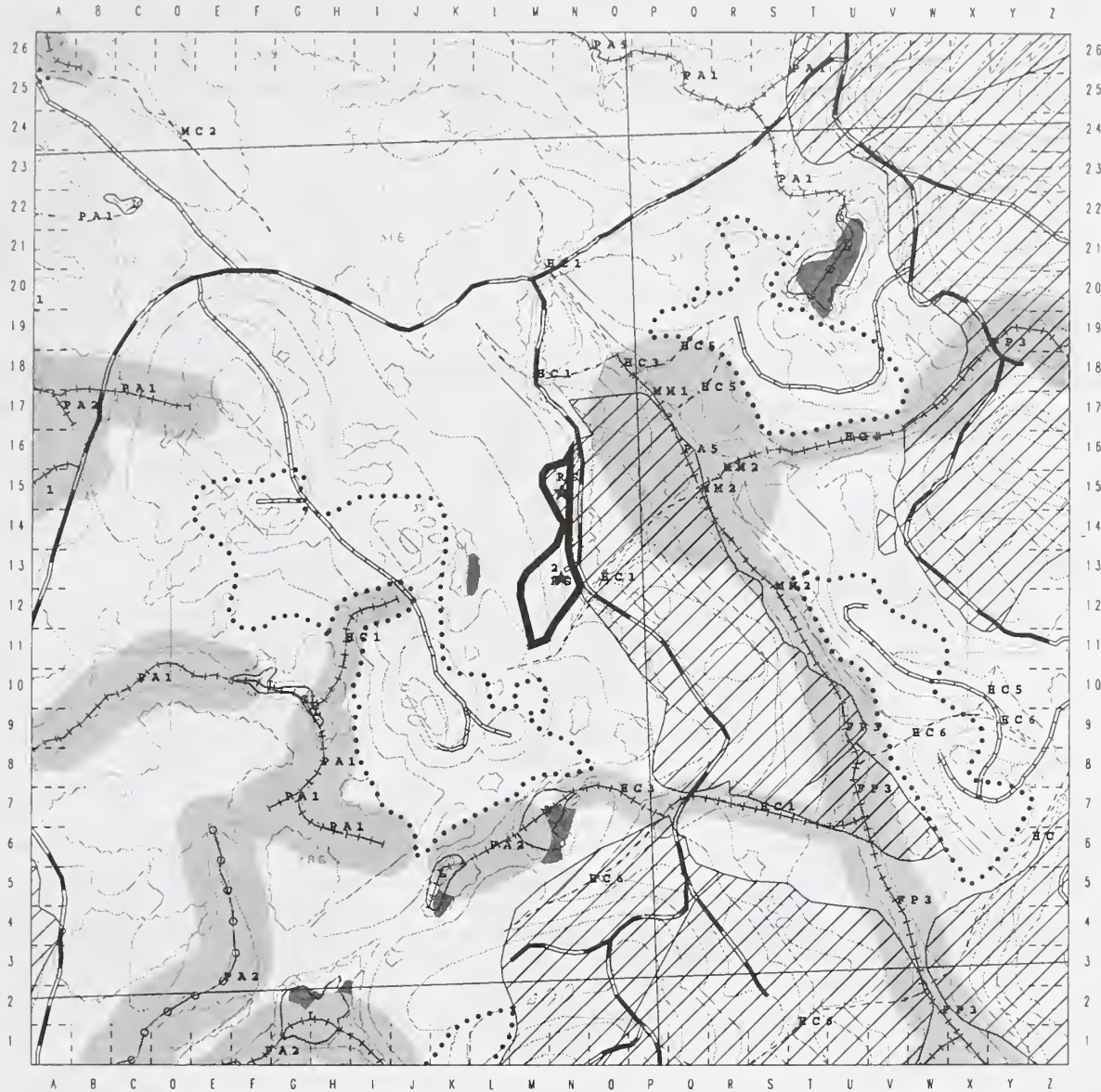
No wildlife mitigation anticipated for this unit.

Unit Data Card - Sea Level Draft EIS

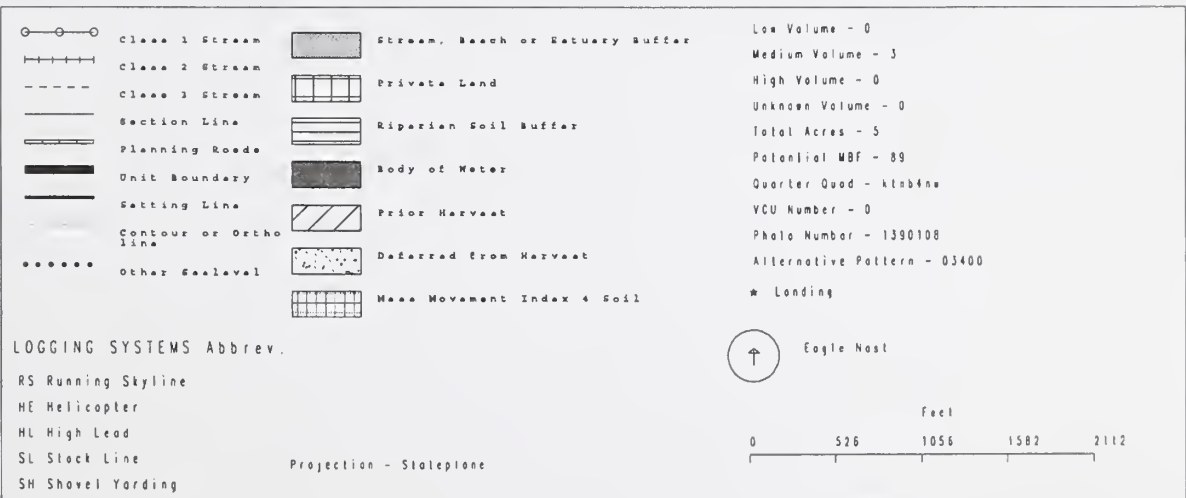
Sealevel Study Area Unit Schematic - Draft Unit 11

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, //files/rel/library/gis/sealevel/draftcard/draftcard.mxd



Note: Compiled from various digital geographic data. This map may not meet National Map Accuracy Standards



Unit Data Card - Sea Level Draft EIS

Unit Number:	17	Planned Acres:	10.3	Silvicultural Systems:	CC, DEF	In Alternatives:	2, 3, 4, 5
LUD:	TP	Harvest Acres:	9	Management Area:	K35	VCU Number:	7530
Primary Watershed Code:	EZ2A	Primary WAA Number:	405	Quad:	ktnb4nw	Photo:	1390-80
Number of Settings:	3	Logging System:	RS	Total Estimated Harvest Volume (MBF):	222.7		

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	10.3	Cedar:	0.0	Mixed Hem/Spr:	0.0	Nonforested:	0.0
Site Productivity Classes	Low:	0.0	Medium:	10.3	High:	0.0	Primary Aspect: W			
Volume Strata	Low:	10.3	Medium:	0.0	High:	0.0	Noncommercial:	0.0		
Visuals	Seen:	0.0	Not Seen:	9.0	Primary ROS Code: RM					
VQOs	PR:	0.0	MM:	9.0	M:	0.0	P:	0.0	R:	0.0
VAC Rating	Low:	0.0	Intermediate:	0.0	High:	10.3	Roadless: 0.0			
Mass Movement Index	Low:	10.3	Medium:	0.0	High:	0.0	Very High:	0.0	Slopes Greater Than 72%: 0.0	
Wetland Type	Forested Wetland:		2.9	Scrub-Shrub Muskeg:		0.5				
TLMP High Value Marten Habitat	0									

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS: No Concerns

FISH/WATERSHED:

Class II (non-direct) MC2 west: Greater of 100 foot or RMA buffer (top of sideslope) required.

Class II (non-direct) PA2 west: 85 foot S&G buffer required.

Class II (non-direct) PA1 south: 85 foot S&G buffer required.

GEOLOGY:

No concerns.

LANDS:

No concerns.

RECREATION/VISUALS:

No Concerns

SILVICULTURE:

Moderate productivity. Clearcut harvest 9 acres. Plant 1 acre with AYC, remainder of stand should regenerate naturally. Harvest deferred on 1 acre for organic wetland concerns. CT 10/22/97

SOILS:

The southern end of this unit is made up of forested wetland (BMP 12.5). The northeast part of the unit contains some scrub-shrub muskeg wetland. At least partial log suspension should be achieved when yarding these areas (BMP 13.9). The planned road is located to avoid this wetland area (BMP 14.2).

TIMBER:

Planned logging system design for this unit is Running Skyline. Confirm final road and landing locations.

WILDLIFE:

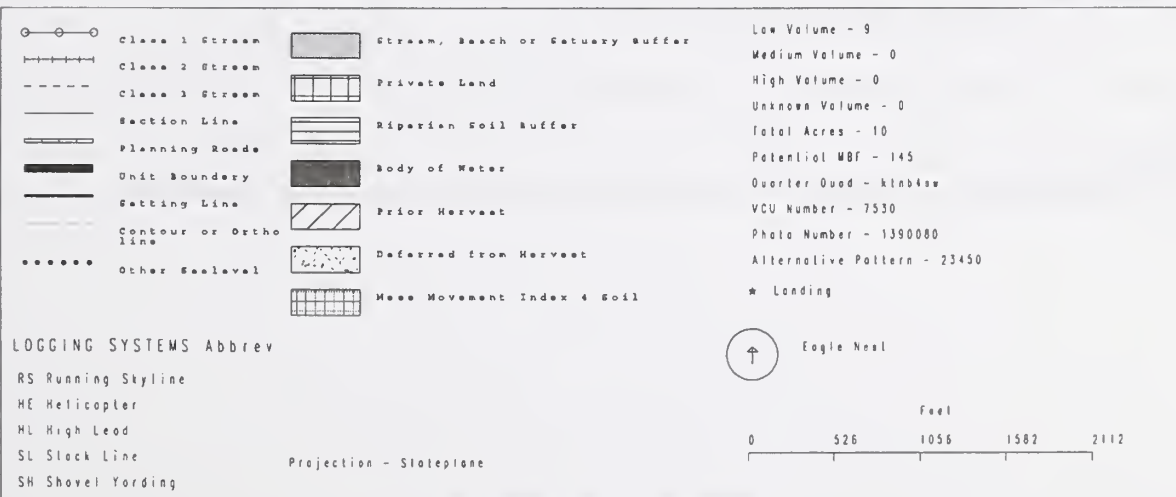
No wildlife mitigation anticipated for this unit.

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 17

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, /islfiles/rs1/library/gis/sealevel/draftcard/draftcard.mxd



Unit Data Card - Sea Level Draft EIS

Unit Number:	22	Planned Acres:	48.2	Silvicultural Systems:	CC, ITM, DEF	In Alternatives:	2, 3, 5
LUD:	TP	Harvest Acres:	28.7	Management Area:	K35	VCU Number:	7560
Primary Watershed Code:	E73A E77A E78A	Primary WAA Number:	405	Quad:	ktnb4nw	Photo:	1390-109
Number of Settings:	8	Logging System:	RS	Total Estimated Harvest Volume (MBF): 590.0			

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	47.9	Cedar:	0.0	Mixed Hem/Spr:	0.3	Nonforested:	0.0
Site Productivity Classes	Low:	0.0	Medium:	48.2	High:	0.0	Primary Aspect: E			
Volume Strata	Low:	0.0	Medium:	9.4	High:	38.5	Noncommercial:	0.3		
Visuals	Seen:	0.0	Not Seen:	28.7	Primary ROS Code: RM					
VQOs	PR:	0.0	MM:	28.7	M:	0.0	P:	0.0	R:	0.0
VAC Rating	Low:	0.0	Intermediate:	0.0	High:	48.2	Roadless: 0.0			
Mass Movement Index	Low:	0.2	Medium:	0.0	High:	47.9	Very High:	0.0	Slopes Greater Than 72%:	0.0
Wetland Type	Forested Wetland:		15.7	Scrub-Shrub Muskeg:		2.1				
TLMP High Value Marten Habitat	38									

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO 1/2/96 RAL

ENGINEERING/ROADS: No Concerns

FISH/WATERSHED:

Class II MM1 southeast: Greater of 120 foot or RMA buffer required.

Class III HC5 southeast: Sideslope S&G buffer to form unit boundary.

Class III HC6 northeast: Sideslope S&G buffer (top of V-notch), split yard or full suspension required.

Class II PA1 and PA2 (direct) southcentral and west: 100 foot S&G buffer required, 100 foot buffer applied.

GEOLOGY:

No concerns.

LANDS:

No concerns.

RECREATION/VISUALS:

No Concerns

SILVICULTURE:

Moderately productive. Use small patch cuts to harvest 11 acres. Leave approximately 19 acres unharvested to meet Marten standards (see wildlife). Harvest remainder of unit using individual tree selection with a prescription designed to meet silvicultural objectives while meeting Marten standards. Patches should regenerate naturally. CT 10/21/97

SOILS:

High landslide potential area is located in the eastern part of this unit (BMP 13.5). About 19 acres of these high landslide potential areas have been placed in deferral areas (BMP 13.1). At least partial log suspension should be achieved when yarding this area (BMP 13.9). Forested wetlands and scrub-shrub muskeg make up much of the southwest part of this unit (BMP 12.5). A low impact yarding system, which provides at least partial log suspension should be used to yard this area (BMP 13.9). Recommend that the planned road be located further north, if possible, to avoid and minimize the effect upon these wetlands (BMP 14.2). Roads on these wetlands should use overlay construction, with minimal side ditching, where practicable, to minimize the disruption of surface flow (BMPs 12.5 and 14.3). Avoid using these wetlands for the disposal of waste material (BMP 14.12).

TIMBER:

Planned logging system design for this unit is Running Skyline. Confirm final road and landing locations and possible corridor locations.

WILDLIFE:

Marten guidelines apply: maintain 30% canopy closure, average 8 large trees/acre (20-30"+), average 3 large decadent trees/acre (20-30"+) average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 22

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, /x:\files\ref\library\gis\sealevel\draft\card\draftcard.mxd



Note: Compiled from various digital geographic data. This map may not meet National Map Accuracy Standards

<ul style="list-style-type: none"> Class 1 Stream Class 2 Stream Class 3 Stream Section Line Planning Road Unit Boundary Settling Line Contour or Ortho line Other Sealevel 	<ul style="list-style-type: none"> Stream, Beach or Retuary Buffer Private Land Riparian Soil Buffer Body of Water Prior Harvest Deferred from Harvest Mass Movement Index 4 Soil 	<ul style="list-style-type: none"> Low Volume - 0 Medium Volume - 1 High Volume - 19 Unknown Volume - 0 Total Acres - 48 Potential WBF - 689 Quarter Quad - 46464 VCU Number - 7360 Photo Number - 1390109 Alternative Pattern - 23050 ★ Landing
--	--	---

LOGGING SYSTEMS Abbrev.

RS Running Skyline
HE Helicopter
HL High Lead
SL Slack Line
SH Shovel Yarding

Projection - Stoleplane

Eagle Nest

Feet
0 526 1056 1582 2112

Unit Data Card - Sea Level Draft EIS

Unit Number:	24	Planned Acres:	14.3	Silvicultural Systems:	ITM, DEF	In Alternatives:	2, 5
LUD:	ML	Harvest Acres:	8.8	Management Area:	K35	VCU Number:	7560
Primary Watershed Code:	E77A	Primary WAA Number:	405	Quad:	ktnb4nw	Photo:	1390-110
Number of Settings:	2	Logging System:	SII	Total Estimated Harvest Volume (MBF):		131.5	

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	14.3	Cedar:	0.0	Mixed Hem/Spr:	0.0	Nonforested:	0.0
Site Productivity Classes	Low:	0.0	Medium:	14.3	High:	0.0	Primary Aspect:			E
Volume Strata	Low:	0.0	Medium:	0.0	High:	14.3	Noncommercial:	0.0		
Visuals	Seen:	0.0	Not Seen:	8.8	Primary ROS Code:					RM
VQOs	PR:	0.0	MM:	8.8	M:	0.0	P:	0.0	R:	0.0
VAC Rating	Low:	7.6	Intermediate:	0.0	High:	6.7	Roadless:			0.0
Mass Movement Index	Low:	14.3	Medium:	0.0	High:	0.0	Very High:	0.0	Slopes Greater Than 72%:	0.0
Wetland Type	None									
TLMP High Value Marten Habitat	14									

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS: No Concerns

FISH/WATERSHED:

Class II (direct) MM1 north: Greater of 120 foot or RMA buffer required.

GEOLOGY:

No concerns..

LANDS:

No concerns.

RECREATION/VISUALS:

No Concerns

SILVICULTURE:

Moderately productive. Defer harvest on 5 acres to meet Marten standards (see wildlife). Harvest remainder of unit using individual tree selection with a prescription designed to meet silvicultural objectives while meeting Marten standards. CT 10/21/97

SOILS:

No concerns.

TIMBER:

Shovel logging is designed for this unit. Confirm final road and landing locations

WILDLIFE:

Unit is within 0.5 miles of bald eagle nest. Follow Interagency Agreement. Blasting prohibited within 0.5 mile of nest March1 through May31. If nest is determined active, blasting prohibited within 0.5 mile of nest June 1 through August 31.
Maintain 1000 foot beach/estuary buffer. Maintain adjacent Old-growth Habitat Reserve.
Marten guidelines apply: maintain 30% canopy closure, average 8 large trees/acre (20-30"+), average 3 large decadent trees/acre (20-30"+)average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 24

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, /sallies/red/library/gis/sealevel/draftcard/draftcard.mxd



Note: Compiled from various digital geographic data. This map may not meet National Map Accuracy Standards

	Class 1 Stream		Stream, Beach or Estuary Buffer
	Class 2 Stream		Private Land
	Class 3 Stream		Riparian Soil Buffer
	Section Line		Body of Water
	Planning Roads		Prior Harvest
	Unit Boundary		Deferred from Harvest
	Settling Line		Mass Movement Index 4 Soil
	Contour or Ortho line		
	Other Sealevel		

Low Volume - 0
 Medium Volume - 0
 High Volume - 4
 Unknown Volume - 0
 Total Acres - 14
 Potential MBF - 154
 Quarter Quad - 44444
 VCU Number - 7560
 Photo Number - 1390110
 Alternative Pattern - 20050
 * Landing

LOGGING SYSTEMS Abbrev.

RS Running Skyline
 HE Helicopter
 ML High Lead
 SL Slack Line
 SH Shovel Yarding

Projection - Stateplane



Eagle Nest



Unit Data Card - Sea Level Draft EIS

Unit Number:	29	Planned Acres:	57.9	Silvicultural Systems:	CC, ITM, DEF	In Alternatives:	2, 3, 4
LUD:	TP	Harvest Acres:	33.8	Management Area:	K35	VCU Number:	7560
Primary Watershed Code:	E72A E73A	Primary WAA Number:	405	Quad:	ktnb4nw	Photo:	1390-46
Number of Settings:	14	Logging System(s):	RS, SH	Total Estimated Harvest Volume (MBF):	863.2		

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	57.9	Cedar:	0.0	Mixed Hem/Spr:	0.0	Nonforested:	0.0
Site Productivity Classes	Low:	0.0	Medium:	57.9	High:	0.0	Primary Aspect: SE			
Volume Strata	Low:	7.1	Medium:	19.2	High:	31.7	Noncommercial:	0.0		
Visuals	Seen:	0.0	Not Seen:	33.8					Primary ROS Code:	RM
VQOs	PR:	0.0	MM:	33.8	M:	0.0	P:	0.0	R:	0.0
VAC Rating	Low:	0.0	Intermediate:	0.0	High:	57.9	Roadless: 0.0			
Mass Movement Index	Low:	8.4	Medium:	0.0	High:	49.5	Very High:	0.0	Slopes Greater Than 72%:	0.0
Wetland Type			Forested Wetland:	17.0			Short Sedge Meadow:	0.2		
TLMP High Value Marten Habitat	32									

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995 -0-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS: No Concerns

FISH/WATERSHED:

Class I MC1 north: Greater of 100 foot or RMA buffer (top of sideslope) required.

Class I PA1 east: 100 foot S&G.

Class III HC6 (2 each) southwest: Sideslope S&G buffer (top of V-notch), split yard or full suspension required.

Class III PA2 and pond (< 3 acres) west; no concerns.

GEOLOGY:

High landslide potential. See Soils for mitigation measures..

LANDS:

No concerns.

RECREATION/VISUALS:

No Concerns

SILVICULTURE:

Moderately productive. Use small patch cuts to harvest 26 acres. Leave approximately 24 acres unharvested to meet Marten standards (see wildlife). Harvest remainder of unit using individual tree selection with a prescription designed to meet silvicultural objectives while meeting Marten standards. Patches should regenerate naturally. CT 10/21/97

SOILS:

The southeast part of the unit contains an area of high landslide potential (BMP 13.5). 16 acres of these high landslide potential areas have been deferred from timber harvest (BMP 13.1). To minimize ground disturbance in this setting, a logging system that provides at least partial suspension when yarding should be used (BMP 13.9). The planned road is located to avoid this area (BMP 14.7). The north and west-central parts of this unit consist of forested wetland (BMP 12.5). Use a low impact logging system when yarding these wetlands to minimize effects upon wetland functions (BMP 13.9). The planned road location has been moved to the south to minimize the effect upon and avoid these wetlands to the extent possible (BMP 14.2). Use overlay road construction on these wetlands with minimal side ditching, to the extent practicable, to minimize the disruption of groundwater flow (BMPs 12.5 and 14.3).

TIMBER:

Shovel logging and Running Skyline systems are designed to this unit. A profile/logging systems analysis will establish unit boundary on the 8 acre southwestern portion of the Running Skyline setting where a slope break was identified.

WILDLIFE:

Maintain 1000 foot beach fringe buffer.

Marten guidelines apply: maintain 30% canopy closure, average 8 large trees/acre (20-30"+), average 3 large decadent trees/acre (20-30"+) average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

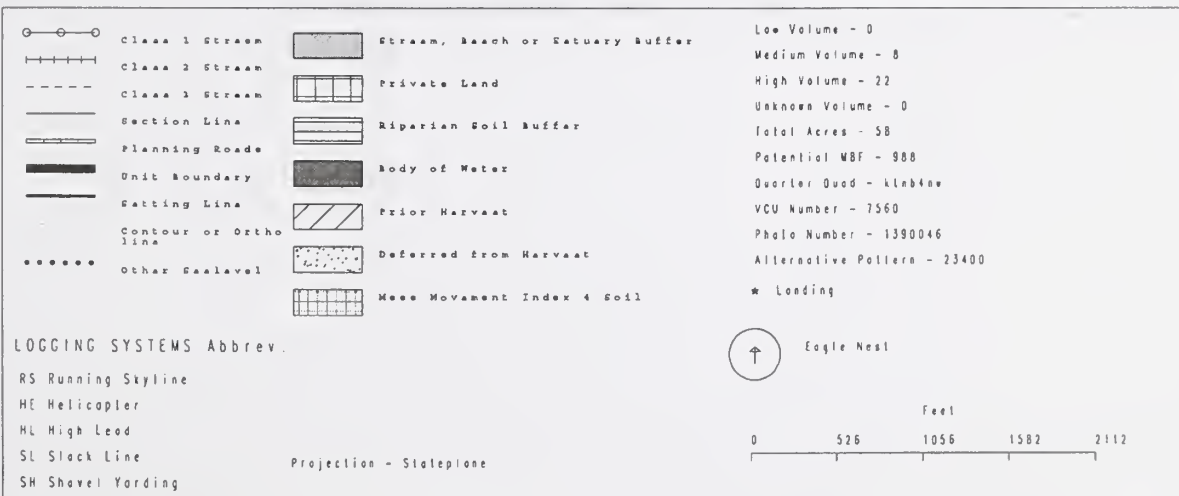
Sealevel Study Area Unit Schematic - Draft Unit 29

Mapscale 1:12000 (5 inch to mile)

Created 11-17-1997, //elife/el/library/gie/eelev5/drollcord/drollcord.eml



Note: Compiled from various digital geographic data. This map may not meet National Map Accuracy Standards.



Unit Data Card - Sea Level Draft EIS

Unit Number:	31	Planned Acres:	7.6	Silvicultural System:	ITM	In Alternative:	2
LUD:	TP	Harvest Acres:	6.8	Management Area:	K35	VCU Number:	7560
Primary Watershed Code:	E72A	Primary WAA Number:	405	Quad:	ktnb4nw	Photo:	1390-78
Number of Settings:	2	Logging System:	SH	Total Estimated Harvest Volume (MBF):		101.7	

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	6.8	Cedar:	0.0	Mixed Hem/Spr:	0.8	Nonforested:	00.0
Site Productivity Classes	Low:	0.0	Medium:	7.6	High:	0.0	Primary Aspect:			S
Volume Strata	Low:	0.0	Medium:	0.0	High:	7.6	Noncommercial:	0.0		
Visuals	Seen:	0.0	Not Seen:	7.6	Primary ROS Code:					RM
VQOs	PR:	0.0	MM:	7.6	M:	0.0	P:	0.0	R:	0.0
VAC Rating	Low:	0.0	Intermediate:	0.0	High:	7.6	Roadless:			0.0
Mass Movement Index	Low:	0.0	Medium:	7.6	High:	0.0	Very High:	0.0	Slopes Greater Than 72%:	0.0
Wetland Type		Forested Wetland:		3.4						
TLMP High Value Marten Habitat		7.6								

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS:

No Concerns

FISH/WATERSHED:

Class III HC1 north: Sideslope S&G buffer (top of V-notch) required.
Class II (direct) HC1 west: Greater of 100 foot or RMA buffer (top of V-notch) required.

GEOLOGY:

No concerns.

LANDS:

No concerns.

RECREATION/VISUALS:

No Concerns

SILVICULTURE:

Moderately productive. Harvest the unit using individual tree selection with a prescription designed to meet silvicultural objectives while meeting Marten standards. CT 10/21/97

SOILS:

The eastern part of this unit consists of forested wetlands (BMP 12.5). A low impact logging system, which provides at least partial suspension when yarding should be used on these wetlands to minimize the effects upon wetland function (BMP 13.9). The planned road location avoids these wetlands to the extent possible (BMP 14.2).

TIMBER:

Shovel logging is designed for this unit. Confirm final road and landing locations.

WILDLIFE:

Marten guidelines apply: maintain 30% canopy closure, average 8 large trees/acre (20-30"+), average 3 large decadent trees/acre (20-30"+) average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 31

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, /f:/files/rel2/library/gis/sealevel/draftcard/draftcard.mxd



Note: Compiled from various digital geographic data. This map may not meet National Map Accuracy Standards



Unit Data Card - Sea Level Draft EIS

Unit Number:	32	Planned Acres:	10.2	Silvicultural System:	CC	In Alternatives:	2, 3
LUD:	TP	Harvest Acres:	10.2	Management Area:	K35	VCU Number:	7530
Primary Watershed Code:	E72A	Primary WAA Number:	405	Quad:	ktnb4nw	Photo:	1390-47
Number of Settings:	2	Logging System:	SH	Total Estimated Harvest Volume (MBF):		302.3	

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	0.0	Cedar:	0.0	Mixed Hem/Spr:	10.2	Nonforested:	0.0
Site Productivity Classes	Low:	10.2	Medium:	0.0	High:	0.0	Primary Aspect:			N
Volume Strata	Low:	0.0	Medium:	10.1	High:	0.0	Noncommercial:	0.1		
Visuals	Seen:	0.0	Not Seen:	10.2	Primary ROS Code:					RM
VQOs	PR:	0.0	MM:	10.2	M:	0.0	P:	0.0	R:	0.0
VAC Rating	Low:	0.0	Intermediate:	0.0	High:	10.2	Roadless:			0.0
Mass Movement Index	Low:	10.2	Medium:	0.0	High:	0.0	Very High:	0.0	Slopes Greater Than 72%:	0.0
Wetland Type	Forested Wetland:		9.6	Scrub-Shrub Muskeg:		0.4				
TLMP High Value Marten Habitat	0.0									

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS: No concerns.

FISH/WATERSHED:

Class I PA2 northeast: 100 foot S&G buffer required.

GEOLOGY:

No concerns.

LANDS:

No concerns.

RECREATION/VISUALS:

No Concerns

SILVICULTURE:

Low productivity. Clearcut harvest 10.2 acres. Stand should regenerate naturally. CT 10/22/97

SOILS:

Most of this unit consists of forested or scrub-shrub muskeg wetlands (BMP 12.5). Recommend that a low impact logging system, which provides at least partial log suspension be used in this unit (BMP 13.9). The only available locations for the planned access road are across these wetlands (BMP 14.2). Overlay road construction with minimal side ditching will be used where practicable, to minimize the disruption of subsurface drainage and alteration of wetness (BMPs 12.5 and 14.3).

TIMBER:

Shovel logging is designed for this unit. Confirm final road and landing locations

WILDLIFE:

No wildlife mitigation anticipated for this unit.

Unit Data Card - Sea Level Draft EIS

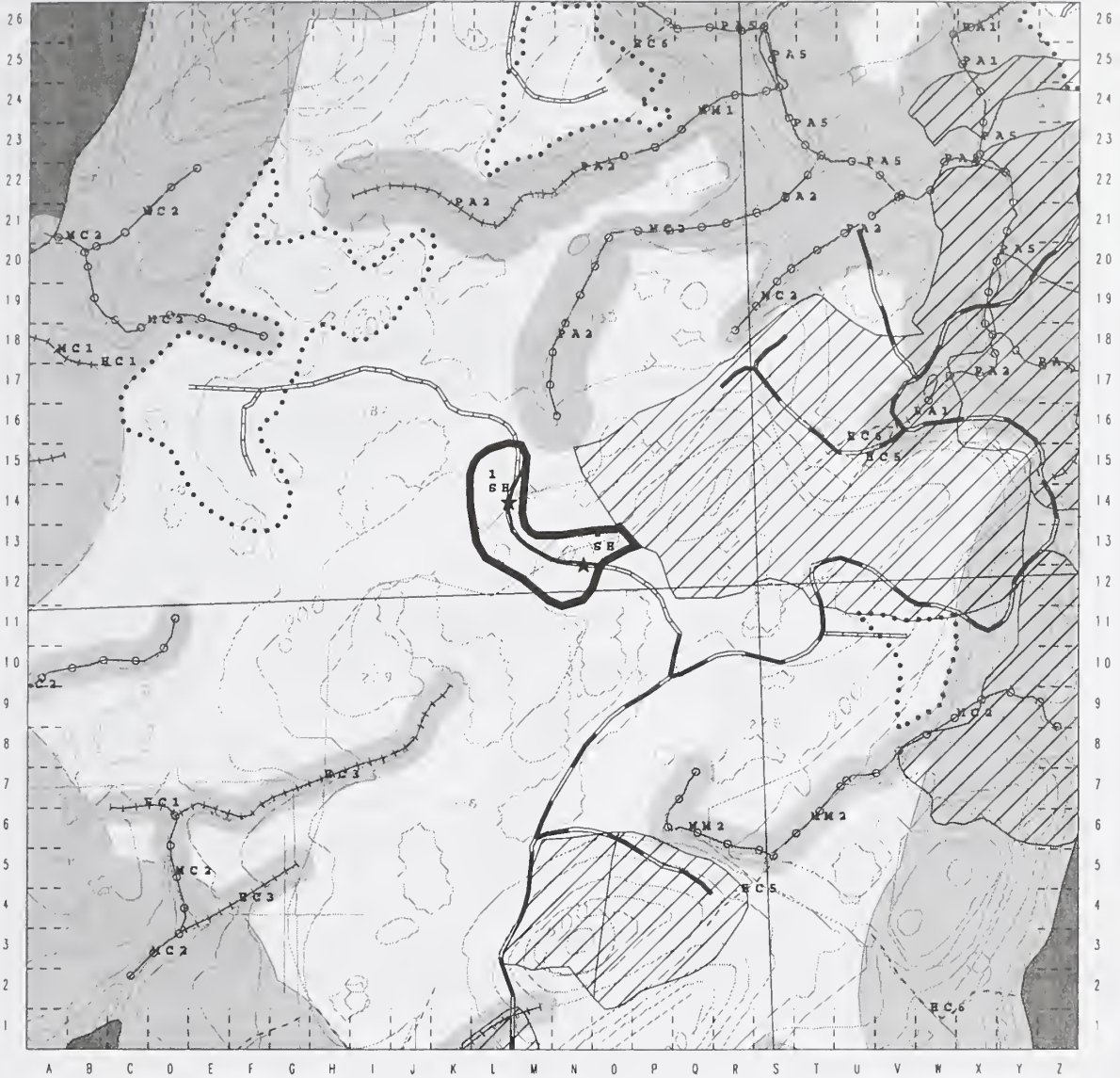
Sealevel Study Area Unit Schematic - Draft Unit 32

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, //s://files/cel/library/gis/sealevel/draftcard/draftcard.eml



A B C D E F G H I J K L M N O P Q R S T U V W X Y Z



- | | | | |
|--|-----------------------|--|---------------------------------|
| | Class 1 Stream | | Stream, Beach or Estuary Buffer |
| | Class 2 Stream | | Private Land |
| | Class 3 Stream | | Riparian Soil Buffer |
| | Section Line | | Body of Water |
| | Planning Road | | Prior Harvest |
| | Unit Boundary | | Deferred from Harvest |
| | Setting Line | | Mass Movement Index 4 Soil |
| | Contour or Ortho line | | |
| | Other Sealevel | | |

Low Volume - 0
 Medium Volume - 10
 High Volume - 0
 Unknown Volume - 0
 Total Acres - 10
 Potential MBF - 266
 Quarter Quad - 41644
 VCU Number - 7530
 Photo Number - 1390047
 Alternative Pattern - 23000
 * Loading

LOGGING SYSTEMS Abbrev.

RS Running Skyline
 HE Helicopter
 HL High Lead
 SL Slick Line
 SH Shovel Yarding

Projection - Stateplane



Eagle Nest



Unit Data Card - Sea Level Draft EIS

Unit Number:	33	Planned Acres:	14.6	Silvicultural Systems:	CC, DEF	In Alternatives:	2, 3
LUD:	TP	Harvest Acres:	8	Management Area:	K35	VCU Number:	7560
Primary Watershed Code:	E72A	Primary WAA Number:	405	Quad:	ktnb4nw	Photo:	1390-47
Number of Settings:	7	Logging System:	SH	Total Estimated Harvest Volume (MBF):		238.6	

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	14.6	Cedar:	0.0	Mixed Hem/Spr:	0.0	Nonforested:	0.0	
Site Productivity Classes	Low:	1.6	Medium:	13.0	High:	0.0	Primary Aspect:				NE
Volume Strata	Low:	0.0	Medium:	1.6	High:	13.0	Noncommercial:	0.0			
Visuals	Seen:	0.0	Not Seen:	8.0					Primary ROS Code:	RM	
VQOs	PR:	0.0	MM:	8.0	M:	0.0	P:	0.0	R:	0.0	
VAC Rating	Low:	0.0	Intermediate:	0.0	High:	14.6	Roadless:				0.0
Mass Movement Index	Low:	1.6	Medium:	13.0	High:	0.0	Very High:	0.0	Slopes Greater Than 72%:	0.0	
Wetland Type			Forested Wetland:	9.7							
TLMP High Value Marten Habitat			13.1								

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS: No Concerns

FISH/WATERSHED:

Class I MC2 north: Greater of 100 foot or RMA (top of sideslope) buffer required.

Class I MM1 southeast: Greater of 120 foot or RMA buffer required.

Class II (direct) PA2 south: 100 foot S&G buffer required.

Class III HC6 east: Sideslope S&G buffer (top of V-notch) required.

GEOLOGY:

No concerns.

LANDS:

No concerns.

RECREATION/VISUALS:

No Concerns

SILVICULTURE:

Moderately productive. Use small patch cuts to harvest 8 acres. Leave approximately 7 acres unharvested to meet Marten standards (see wildlife). Patches should regenerate naturally. CT 10/21/97

SOILS:

Most of this unit consists of forested wetlands (BMP 12.5). Utilize a low impact yarding system which provides at least partial log suspension (BMP 13.9) on these wetlands. The planned road must be located on these wetlands to avoid crossings on the AHMU Class I stream to the east (BMP 14.2). Use overlay road construction with minimal side ditching on these wetlands to minimize the disruption of groundwater flow (BMPs 12.5 and 14.3). Avoid using these wetlands as disposal sites for waste material and logging slash (BMP 14.19).

TIMBER:

Shovel logging is designed for this unit. Confirm final road and landing locations.

WILDLIFE:

Marten guidelines apply: maintain 30% canopy closure, average 8 large trees/acre (20-30"+), average 3 large decadent trees/acre (20-30"+) average 3 pieces downed logs per acre (20-30"+).

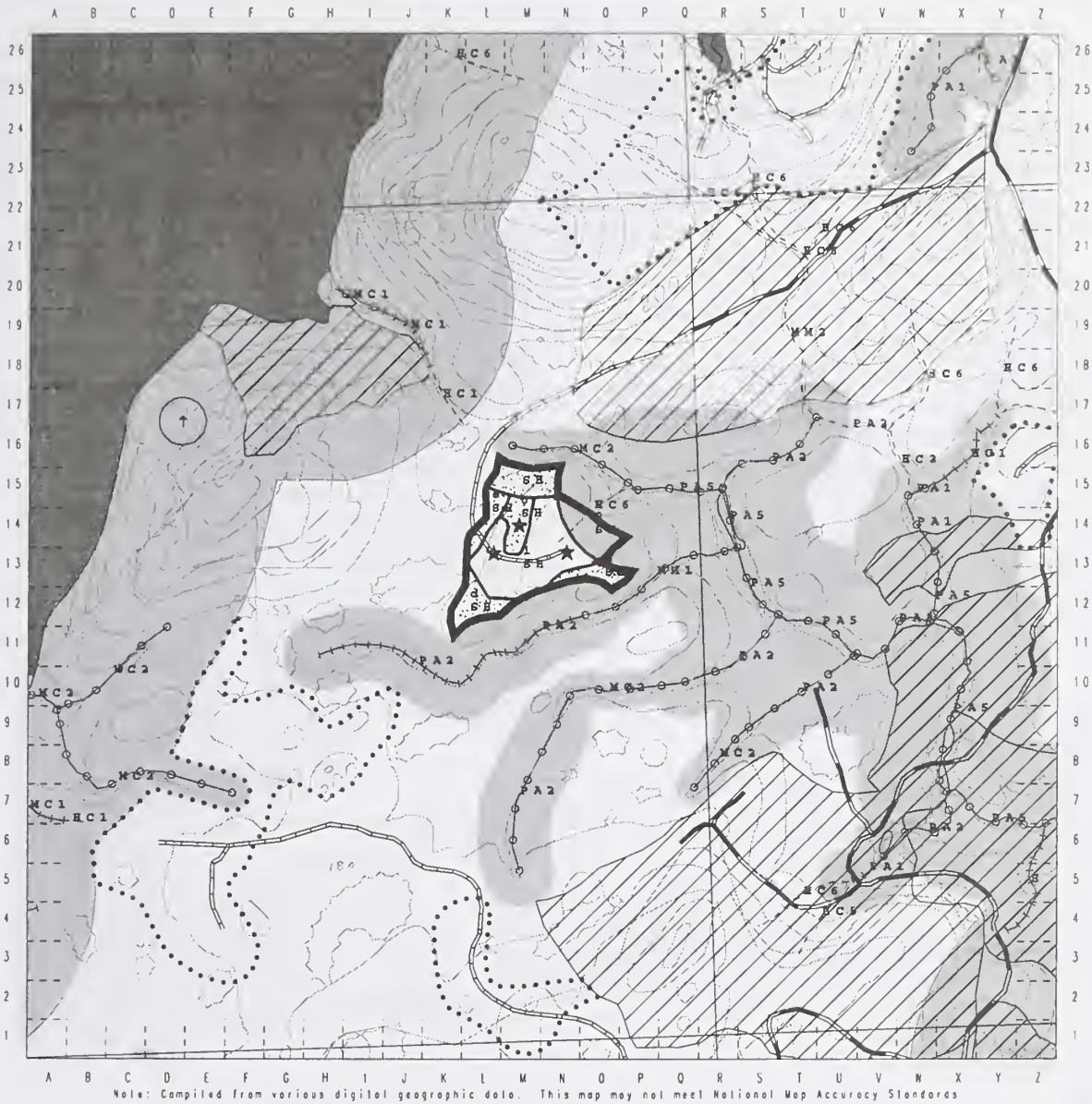
Unit is within 0.5 miles of a bald eagle nest. Follow Interagency Agreement. Blasting prohibited within 0.5 mile of nest March1 through May31. If nest is determined active, blasting prohibited within 0.5 mile of nest June 1 through August 31.

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 33

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, /sailin/rel/library/gis/sealevel/draftcard/draftcard.mxd



Unit Data Card - Sea Level Draft EIS

Unit Number:	36	Planned Acres:	36.3	Silvicultural Systems:	CC, DEF	In Alternatives:	2, 3
LUD:	TP	Harvest Acres:	9.4	Management Area:	K35	VCU Number:	7530
Primary Watershed Code:	E72A EY9A	Primary WAA Number:	405	Quad:	ktnb4nw	Photo:	1390-47
Number of Settings:	7	Logging System:	SH	Total Estimated Harvest Volume (MBF):		279.9	

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	36.3	Cedar:	0.0	Mixed Hem/Spr:	0.0	Nonforested:	0.0	
Site Productivity Classes	Low:	35.9	Medium:	0.0	High:	0.0	Primary Aspect:				NW
Volume Strata	Low:	0.0	Medium:	35.9	High:	0.4	Noncommercial:	0.4			
Visuals	Seen:	0.0	Not Seen:	9.4						Primary ROS Code:	RM
VQOs	PR:	0.0	MM:	9.4	M:	0.0	P:	0.0	R:	0.0	
VAC Rating	Low:	2.8	Intermediate:	0.0	High:	33.5	Roadless:				0.0
Mass Movement Index	Low:	36.3	Medium:	0.0	High:	0.0	Very High:	0.0	Slopes Greater Than 72%:	0.0	
Wetland Type	Forested Wetland:			4.6							
TLMP High Value Marten Habitat	0.0										

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS: No Concerns

FISH/WATERSHED:

Class I MC2 center west: Greater of 100 foot or RMA (top of sideslope) buffer required.

GEOLOGY:

No concerns.

LANDS:

No concerns.

RECREATION/VISUALS:

No Concerns

SILVICULTURE:

Low productivity. Clearcut harvest 9 acres. Plant 1 acre with AYC, remainder of stand should regenerate naturally. Harvest deferred on 1 acres to meet Marten standards (see wildlife). CT 10/22/97

SOILS:

The southern two-thirds of this unit includes small areas of forested wetlands (BMP 12.5). Recommend that at least partial log suspension be obtained when yarding these forest wetland (BMP 13.9). Relocating the proposed access to the north to avoid these wetlands would place it within several hundred feet of an AHMU Class I stream (BMP 14.2). Recommend the planned road location as the preferred. Use overlay road construction with minimal side ditching, where practicable, to minimize the effects upon groundwater flow (BMPs 12.5 and 14.3). Avoid using these wetlands for the disposal of waste material or logging slash (BMP 14.19).

TIMBER:

Shovel logging is designed for this unit. Confirm final road and landing locations.

WILDLIFE:

Unit is within 0.5 miles of a bald eagle nest. Follow Interagency Agreement. Blasting prohibited within 0.5 mile of nest March 1 through May 31. If nest is determined active, blasting prohibited within 0.5 mile of nest June 1 through August 31. Maintain 1000 foot beach/estuary buffer.

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 36

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, //files/rel/library/gis/sealevel/draftcard/draftcard.mxd



Note: Compiled from various digital geographic data. This map may not meet National Map Accuracy Standards

	Class 1 Stream		Stream, Beach or Estuary Buffer
	Class 2 Stream		Private Land
	Class 3 Stream		Riparian Soil Buffer
	Section Line		Body of Water
	Planning Road		Prior Harvest
	Unit Boundary		Deferred from Harvest
	Setting Line		Waste Movement Index 4 Soil
	Contour or Ortho line		
	Other Sealevel		

Low Volume - 0
 Medium Volume - 0
 High Volume - 0
 Unknown Volume - 0
 Total Acres - 36
 Potential MBF - 0
 Quarter Oued - klabline
 VCU Number - 7530
 Photo Number - 1390047
 Alternative Pattern - 23000
 * Landing

LOGGING SYSTEMS Abbrev.

RS Running Skyline
 HE Helicopter
 HL High Lead
 SL Slack Line
 SH Shovel Yarding

Projection - Stateplane



Eagle Nest



Unit Data Card - Sea Level Draft EIS

Unit Number:	37	Planned Acres:	5.1	Silvicultural Systems:	CC, ITM, DEF	In Alternatives:	2, 3
LUD:	TP	Harvest Acres:	3.5	Management Area:	K35	VCU Number:	7560
Primary Watershed Code:	OOOZ	Primary WAA Number:	405	Quad:	ktnb4nw	Photo:	1390-78
Number of Settings:	3	Logging System:	RS	Total Estimated Harvest Volume (MBF):		68.4	

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	0.0	Cedar:	0.0	Mixed Hem/Spr.	5.1	Nonforested:	0.0					
Site Productivity Classes	Low:	0.0	Medium:	5.1	High:	0.0	Primary Aspect:				E				
Volume Strata	Low:	0.0	Medium:	0.0	High:	5.0	Noncommercial:	0.1	Primary ROS Code:			RM			
Visuals	Seen:	0.0	Not Seen:	3.5											
VQOs	PR:	0.0	MM:	3.5	M:	0.0	P:	0.0	R:			0.0			
VAC Rating	Low:	0.0	Intermediate:	0.6	High:	4.5	Roadless:					0.0			
Mass Movement Index	Low:	0.0	Medium:	5.1	High:	0.0	Very High:	0.0	Slopes Greater Than 72%:			0.0			
Wetland Type	Forested Wetland:		3.0												
TLMP High Value Marten Habitat	5.1														

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS: No Concerns

FISH/WATERSHED:

Class I MC2 south: Greater of 100 foot or RMA (top of sideslope) buffer required.

GEOLOGY:

No concerns.

LANDS:

No concerns.

RECREATION/VISUALS:

No Concerns

SILVICULTURE:

Moderate productivity. Group select 1 acre. Harvest 2 acres of unit using individual tree selection with a prescription designed to meet silvicultural objectives while meeting Marten standards. Defer from harvest 2 acres to meet Marten standards. CT 10/21/97

SOILS:

The central part of this unit consists of forested wetlands (BMP 12.5). Use a low impact logging system when yarding these forested wetlands (BMP 13.9) to minimize the disruption of wetland functions. The only feasible road locations to access this unit pass through these wetlands (BMP 14.2). Use overlay road construction with minimal side ditching, where practicable, to minimize the effect upon groundwater flows (BMP 14.3). Avoid placing waste material, logging slash or other fill on these wetlands (BMP 14.19).

TIMBER:

Planned logging system design for this unit is Running Skyline. Confirm final road and landing locations.

WILDLIFE:

Maintain adjacent wildlife corridor.

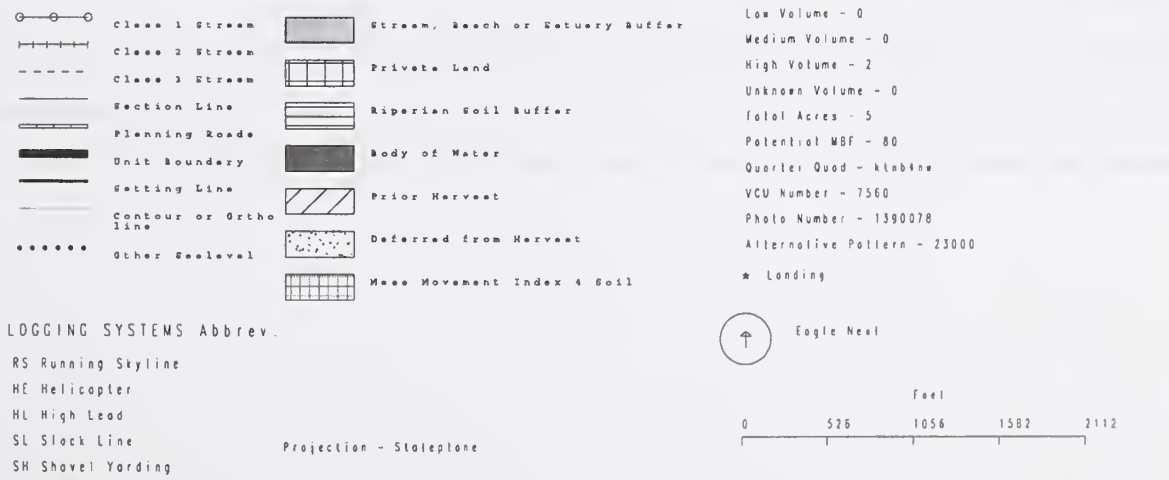
Marten guidelines apply: maintain 30% canopy closure, average 8 large trees/acre (20-30"+), average 3 large decadent trees/acre (20-30"+) average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 37

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, /data/sea/rel/library/gis/sealevel/draftcard/draftcard.mxd



Unit Data Card - Sea Level Draft EIS

Unit Number:	39	Planned Acres:	21.3	Silvicultural Systems:	CC, DEF	In Alternatives:	2, 3, 4
LUD:	TP	Harvest Acres:	12.1	Management Area:	K35	VCU Number:	7530
Primary Watershed Code:	E77A	Primary WAA Number:	405	Quad:	ktnb4nw	Photo:	1390-108
Number of Settings:	5	Logging Systems:	RS, SH	Total Estimated Harvest Volume (MBF):		359.1	

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	21.3	Cedar:	0.0	Mixed Hem/Spr:	0.0	Nonforested:	0.0	
Site Productivity Classes	Low:	0.0	Medium:	3.3	High:	18.1	Primary Aspect:				S
Volume Strata	Low:	0.0	Medium:	3.3	High:	18.1	Noncommercial:	0.0			
Visuals	Seen:	0.0	Not Seen:	12.1					Primary ROS Code:	RM	
VQOs	PR:	0.0	MM:	12.1	M:	0.0	P:	0.0	R:	0.0	
VAC Rating	Low:	0.0	Intermediate:	21.3	High:	0.0	Roadless:				0.0
Mass Movement Index	Low:	3.3	Medium:	18.1	High:	0.0	Very High:	0.0	Slopes Greater Than 72%:	0.0	
Wetland Type	Forested Wetland:		9.9		Sphagnum Peat Bog:		0.2		Tall Sedge Fen:		0.5
TLMP High Value Marten Habitat	18.3										

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS: No Concerns

FISH/WATERSHED:

Class II (direct) HC4 south: Greater of 100 foot or RMA (top of V-notch) buffer required.
 Class II (direct) MM2 south: Greater of 120 foot or RMA buffer required.
 Class II (direct) HC3 west: Greater of 100 foot or RMA (top of V-notch) buffer required.
 Class II (direct) MM1 west: Greater of 120 foot or RMA buffer required.
 Class II (direct) PA5 west: 100 foot S&G buffer required.
 Class III HC5 (2 each) west: Sideslope S&G buffer (top of V-notch), split yard or full suspension required.
 Class II lake, > 3 acs. northeast: Greater of 100 foot or RMA buffer required.

GEOLOGY:

Soils consist of erodible volcanic ash and cinders. See Soils for mitigation measures.

LANDS:

No concerns.

RECREATION/VISUALS:

No Concerns

SILVICULTURE:

Moderately productive. Use small patch cuts to harvest 12 acres. Leave approximately 9.3 acres unharvested to meet Marten standards (see wildlife). Plant 2 acres with AYC the remainder of the patches should regenerate naturally. CT 10/21/97

SOILS:

Soils consist of erodible volcanic ash and cinders. Minimize roadcuts and other operations which expose soil material. Most of this unit consists of forested wetlands (BMP 12.5). There are also small areas of Sphagnum peat bog and tall sedge fen in the northern part of the unit. Recommend that at least partial log suspension be provided when yarding this unit (BMP 13.9). Roads should be located so as to minimize the potential effects upon these wetlands (BMP 14.1). Use overlay road construction with minimal side ditching on these wetlands, where practicable, to minimize effects upon groundwater flows (BMP 12.5 and 14.3). Avoid placing waste material, logging slash or other fill on these wetlands (BMP 14.19).

TIMBER:

Planned logging system design for this unit is Shovel and Running Skyline. Confirm final road and landing locations.

WILDLIFE:

Marten guidelines apply: maintain 10-20% of canopy, average 4 large trees/acre (20-30"+), average 3 snags per acre, average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 39

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, //xfiles/rel/library/gis/sealevel/draftcard/draftcard.mxd



- | | | | |
|--|-----------------------|--|---------------------------------|
| | Class 1 Stream | | Stream, Beach or Estuary Buffer |
| | Class 2 Stream | | Private Land |
| | Class 3 Stream | | Riparian Soil Buffer |
| | Section Line | | Body of Water |
| | Planning Road | | Prior Harvest |
| | Unit Boundary | | Deferred from Harvest |
| | Settling Line | | Mass Movement Index 4 Soil |
| | Contour or Ortho line | | |
| | Other Sealevel | | |

Low Volume - 0
 Medium Volume - 0
 High Volume - 12
 Unknown Volume - 0
 Total Acres - 21
 Potential WBF - 421
 Quarter Quad - klnblnw
 VCU Number - 7530
 Photo Number - 1390108
 Alternative Pattern - 23400
 * Landing

LOGGING SYSTEMS Abbrev

RS Running Skyline
 HE Helicopter
 HL High Lead
 SL Stock Line
 SH Shovel Yarding

Projection - Stateplane



Eagle Nest



Unit Data Card - Sea Level Draft EIS

Unit Number:	40	Planned Acres:	18.5	Silvicultural Systems:	CC, DEF	In Alternatives:	2, 3, 4, 5
LUD:	TP	Harvest Acres:	9.6	Management Area:	K35	VCU Number:	7560
Primary Watershed Code:	E77A	Primary WAA Number:	405	Quad:	ktnb4nw	Photo:	1390-108
Number of Settings:	7	Logging Systems:	RS, SH	Total Estimated Harvest Volume (MBF):		285.5	

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	18.1	Cedar:	0.0	Mixed Hem/Spr:	0.4	Nonforested:	0.0	
Site Productivity Classes	Low:	0.0	Medium:	0.8	High:	17.7	Primary Aspect:				E
Volume Strata	Low:	0.0	Medium:	0.0	High:	18.0	Noncommercial:	0.5			
Visuals	Seen:	0.0	Not Seen:	9.6	Primary ROS Code:						RM
VQOs	PR:	0.0	MM:	9.6	M:	0.0	P:	0.0	R:	0.0	
VAC Rating	Low:	0.0	Intermediate:	3.6	High:	14.9	Roadless:				0.0
Mass Movement Index	Low:	0.0	Medium:	18.5	High:	0.0	Very High:	0.0	Slopes Greater Than 72%:	0.4	
Wetland Type	Forested Wetlands:			3.1							
TLMP High Value Marten Habitat	18.5										

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS: No Concerns

FISH/WATERSHED:

Class II (adfluvial) HC1 east: Greater of 100 foot or RMA (top of V-notch) buffer required.
 Class III HC6 northeast: Sideslope S&G buffer (top of V-notch) to form unit boundary.
 Class III HC5 center to northeast: Sideslope S&G buffer or split yard or full suspension required.
 Class II (adfluvial) HC3 south: Greater of 100 foot or RMA (top of V-notch) buffer required.
 Class II (non-direct) HC3: Greater of 100 foot or RMA (top of V-notch) buffer required.

GEOLOGY:

No concerns.

LANDS:

No concerns.

RECREATION/VISUALS:

No Concerns

SILVICULTURE:

Highly productive. Use small patch cuts to harvest 10 acres. Leave approximately 9.5 acres unharvested to meet Marten standards (see wildlife). Patches should regenerate naturally. CT 10/21/97

SOILS:

An area of forested wetlands is located along the eastern edge of this unit (BMP 12.5). Recommend that at least partial log suspension be achieved when yarding these forested wetlands (BMP 13.9). It is not feasible to relocate the planned road uphill, to the west to avoid road construction on these wetlands (BMP 14.2). Use overlay road construction with minimal side ditching, where practicable, to minimize the disruption of groundwater flow (BMPs 12.5 and 14.3). Avoid placing waste material, logging slash and other fill on these wetlands (BMP 14.19).

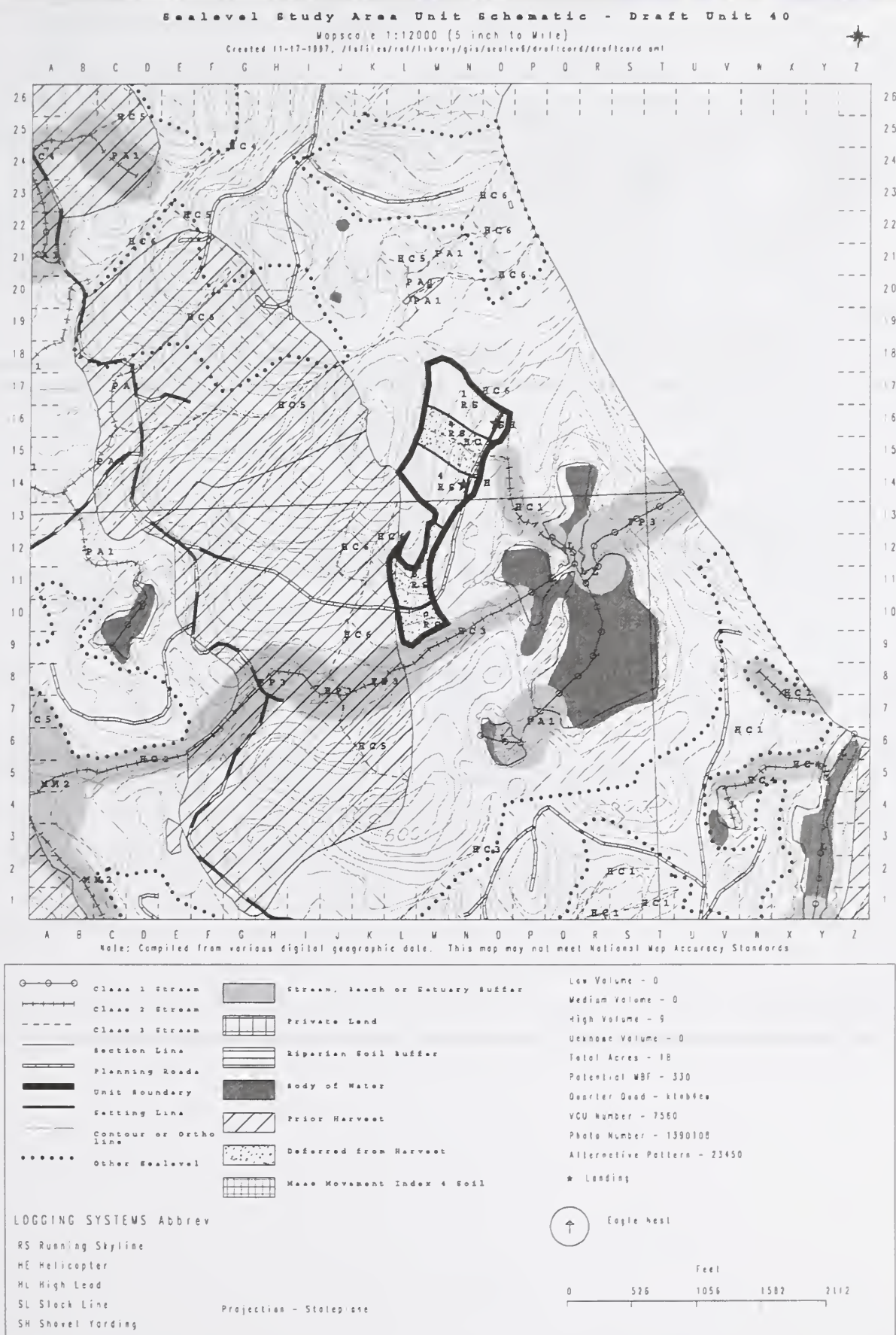
TIMBER:

Planned logging system design for this unit is Running Skyline. Confirm final road and landing locations.

WILDLIFE:

Marten guidelines apply: maintain 30% canopy closure, average 8 large trees/acre (20-30"+), average 3 large decadent trees/acre (20-30"+) average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS



Unit Data Card - Sea Level Draft EIS

Unit Number:	41	Planned Acres:	22.7	Silvicultural Systems:	CC, ITM, DEF	In Alternatives:	2, 3, 4, 5
LUD:	TP	Harvest Acres:	13.5	Management Area:	K35	VCU Number:	7530
Primary Watershed Code:	E77A	Primary WAA Number:	405	Quad:	ktnb4nw	Photo:	1390-108
Number of Settings:	5	Logging Systems:	RS, SH	Total Estimated Harvest Volume (MBF):		326.0	

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	22.7	Cedar:	0.0	Mixed Hem/Spr:	0.0	Nonforested:	0.0
Site Productivity Classes	Low:	0.0	Medium:	0.0	High:	22.7	Primary Aspect: WSW			
Volume Strata	Low:	0.0	Medium:	10.0	High:	12.3	Noncommercial:	0.4		
Visuals	Seen:	0.0	Not Seen:	13.5					Primary ROS Code:	RM
VQOs	PR:	0.0	MM:	13.5	M:	0.0	P:	0.0	R:	0.0
VAC Rating	Low:	0.0	Intermediate:	22.7	High:	0.0	Roadless: 0.0			
Mass Movement Index	Low:	0.0	Medium:	22.7	High:	0.0	Very High:	0.0	Slopes Greater Than 72%:	0.0
Wetland Type			Forested Wetland:	1.4			Shrub-Scrub Muskeg:	0.4		
TLMP High Value Marten Habitat			9.0							

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS: No Concerns

FISH/WATERSHED:

Class II (direct) MM2 northwest: Greater of 120 foot or RMA buffer required.

Class II (direct) FP3 west: Greater of 130 foot or floodplain RMA buffer required.

Class III HC6 center west: Sideslope S&G buffer (top of V-notch), split yard or full suspension required.

Class III HC3 south: Sideslope S&G buffer (top of V-notch), split yard or full suspension required.

GEOLOGY:

No concerns.

LANDS:

No concerns.

RECREATION/VISUALS:

No Concerns

SILVICULTURE:

Highly productive. Use small patch cuts to harvest 10 acres. Leave approximately 9 acres unharvested to meet Marten standards (see wildlife). Harvest remainder of unit using individual tree selection with a prescription designed to meet silvicultural objectives while meeting Marten standards. Patches should regenerate naturally. CT 10/21/97

SOILS:

Small areas of forested wetland are found along the east side of this unit (BMP 12.5). The planned access road will pass through these forest wetlands. Use overlay road construction, with minimal side ditching, where practicable, to minimize the effects upon groundwater flow (BMP 14.3). Do not use these wetlands to dispose of waste material, logging slash, or other fill material (BMP 14.19).

TIMBER:

Planned logging system design for this unit is Running Skyline and Shovel. Confirm final road and landing locations. Verify feasibility of split yarding Class III stream within unit and adjust roads, landings, or modify unit boundary if required.

WILDLIFE:

Marten guidelines apply: maintain 30% canopy closure, average 8 large trees/acre (20-30"+), average 3 large decadent trees/acre (20-30"+) average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 41

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, //files/ret/library/gis/sealevel/draftcard/draftcard.mxd



<ul style="list-style-type: none"> Class 1 Stream Class 2 Stream Class 3 Stream Section Line Planning Roads Unit Boundary Setting Line Contour or Ortho line Other Sealevel 	<ul style="list-style-type: none"> Stream, Beach or Estuary Buffer Private Land Riparian Soil Buffer Body of Water Prior Harvest Deferred from Harvest Mass Movement Index 4 Soil 	<ul style="list-style-type: none"> Low Volume - 0 Medium Volume - 5 High Volume - 7 Unknown Volume - 0 Total Acres - 23 Potential MBF - 369 Quarter Quad - klabine VCU Number - 7530 Phala Number - 1390108 Alternative Pattern - 23450 ★ Landing
--	--	--

LOGGING SYSTEMS Abbrev.

RS Running Skyline
HE Helicopter
HL High Lead
SL Slack Line
SH Shovel Yarding

Projection - Stateplane

0 526 1056 1582 2112

feet

↑ Eagle Nest

Unit Data Card - Sea Level Draft EIS

Unit Number:	42	Planned Acres:	32.0	Silvicultural Systems:	CC, DEF	In Alternatives:	2, 3, 5
LUD:	ML	Harvest Acres:	15.9	Management Area:	K35	VCU Number:	7560
Primary Watershed Code:	EZ9A	Primary WAA Number:	405	Quad:	ktnb4nw	Photo:	1390-109
Number of Settings:	10	Logging Systems:	RS, SH	Total Estimated Harvest Volume (MBF):		474.3	

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	31.5	Cedar:	0.0	Mixed Hem/Spr:	0.5	Nonforested:		0.0	
Site Productivity Classes	Low:	0.0	Medium:	0.0	High:	32.0	Primary Aspect:					SSE
Volume Strata	Low:	0.0	Medium:	0.0	High:	30.3	Noncommercial:	1.7				
Visuals	Seen:	14.4	Not Seen:	1.5						Primary ROS Code:	RM	
VQOs	PR:	14.4	MM:	1.5	M:	0.0	P:	0.0	R:	0.0		
VAC Rating	Low:	19.7	Intermediate:	12.4	High:	0.0	Roadless:					0.0
Mass Movement Index	Low:	0.0	Medium:	0.1	High:	31.9	Very High:	0.0	Slopes Greater Than 72%:			0.0
Wetland Type												
TLMP High Value Marten Habitat	31.0											

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS: No Concerns

FISH/WATERSHED:

Class IV HC5 east: Sideslope S&G buffer or split yard or partial suspension required.

Class II (non-direct) MM1 east: Greater of 120 foot or RMA buffer required.

Class III HC6 west: Sideslope S&G buffer (top of V-notch) required.

GEOLOGY:

High landslide potential unit (See Soils).

LANDS:

No concerns.

RECREATION/VISUALS:

No Concerns

SILVICULTURE:

Use small patch clearcuts harvesting 16 acres and retaining 16 acres unharvested to meet Martin standards. Patches should regenerate naturally. High productivity. CT 10/21/97

SOILS:

Unit has a high potential for landslides (MMI=3). Half of these MMI=3 soils have been placed in deferral areas (BMP 13.1). Use a low impact logging system that achieves at least partial log suspension when yarding, to minimize ground disturbance (BMP 13.9) on the rest of the MMI=3 soils. Locate roads to avoid high landslide potential sites (BMP 14.2). Roads may require full-bench construction on high landslide potential slopes (BMP 14.7).

TIMBER:

Planned logging system design for this unit is Shovel and Running Skyline. Confirm final road and landing locations.

WILDLIFE:

Marten guidelines apply: maintain 30% canopy closure, average 8 large trees/acre (20-30"+), average 3 large decadent trees/acre (20-30"+) average 3 pieces downed logs per acre (20-30"+).

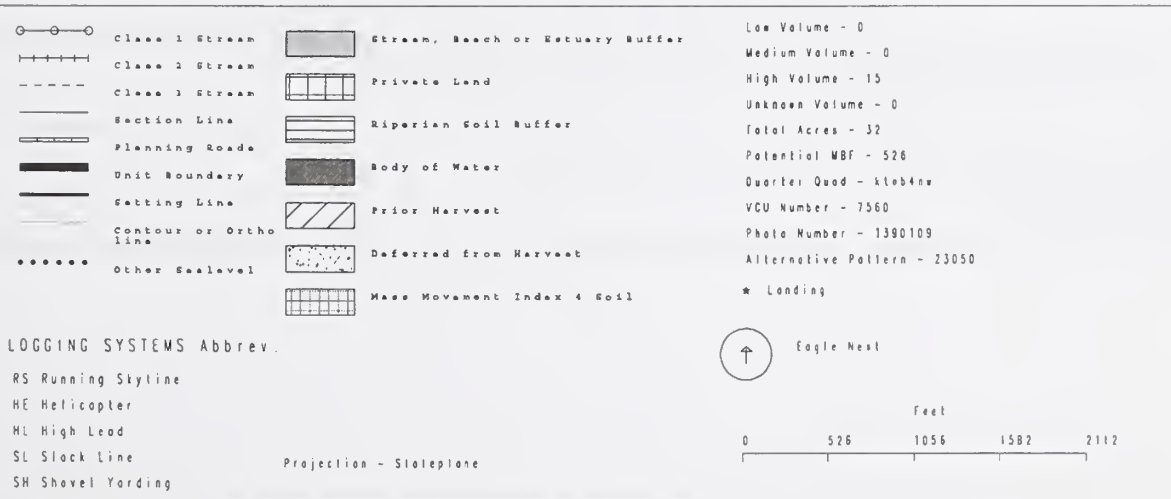
Maintain 1000 foot beach buffer.

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 42

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, /tstiles/csl/library/gis/sealevel/draftcard/draftcard.mxd



Unit Data Card - Sea Level Draft EIS

Unit Number:	43	Planned Acres:	47.7	Silvicultural System:	CC, DEF	In Alternatives:	2, 3
LUD:	ML	Harvest Acres:	23.2	Management Area:	K35	VCU Number:	7560
Primary Watershed Code:	EZ8A	Primary WAA Number:	405	Quad:	ktnb4nw	Photo:	1390-110
Number of Settings:	9	Logging System:	RS	Total Estimated Harvest Volume (MBF):		678.3	

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	25.7	Cedar:	0.0	Mixed Hem/Spr:	22.0	Nonforested:	0.0		
Site Productivity Classes	Low:	0.0	Medium:	0.0	High:	47.7	Primary Aspect:				W	
Volume Strata	Low:	0.0	Medium:	0.0	High:	46.3	Noncommercial:	1.4				
Visuals	Seen:	6.3	Not Seen:	16.9	Primary ROS Code:							RM
VQOs	PR:	6.3	MM:	16.9	M:	0.0	P:	0.0	R:	0.0		
VAC Rating	Low:	26.0	Intermediate:	21.7	High:	0.0	Roadless:				0.0	
Mass Movement Index	Low:	0.0	Medium:	0.0	High:	47.7	Very High:	0.0	Slopes Greater Than 72%:			1.2
Wetland Type												
TLMP High Value Marten Habitat		47.7										

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS: No Concerns

FISH/WATERSHED:

Class II (non-direct) MM1 northwest: Greater of 120 foot or RMA buffer required.
 Class II (non-direct) HC2 northwest: Greater of 100 foot or RMA (top of V-notch) buffer required.
 Class II (non-direct) HC2 center to north: Greater of 100 foot or RMA (top of V-notch) buffer required.
 Class II (non-direct) HC1 center to north (3 each): Greater of 100 foot or RMA (top of V-notch) buffer required.
 Class III HC6 northwest: Sideslope S&G buffer (top of V-notch), split yard or full suspension required.
 Class III HC5 south: Sideslope S&G buffer to form unit boundary.

GEOLOGY:

High landslide potential (See Soils).

LANDS:

No concerns.

RECREATION/VISUALS:

No Concerns

SILVICULTURE:

Highly productive. Use small patch cuts to harvest 23 acres. Leave approximately 24.7 acres unharvested to meet Marten standards (see wildlife). Patches should regenerate naturally. CT 10/21/97

SOILS:

The eastern part of this unit has a high landslide potential (MMI=3) (BMP 13.5). 24.5 acres of the MMI=3 soils have been placed in deferral areas (BMPs 13.1 and 13.5). Recommend the use of logging system that provides at least partial log suspension when downhill yarding these eastern settings (BMP 13.9). The planned road location avoids these high landslide potential areas (BMP 14.2). This unit contains 1.2 acres of slopes greater than 72%. An on-site analysis of these slopes by the IDT soil scientist determined that the risk of potential impacts of accelerated erosion on downslope and downstream fish habitat, other beneficial uses of water and other resources was minimal and are included within the timber harvest unit (BMP 13.2).

TIMBER:

Planned logging system design for this unit is Running Skyline. Confirm final road and landing locations. Verify feasibility of full suspension yarding over Class III (HC6) and Class III (HC5) streams within unit and adjust roads, landings, or modify unit boundary if required.

WILDLIFE:

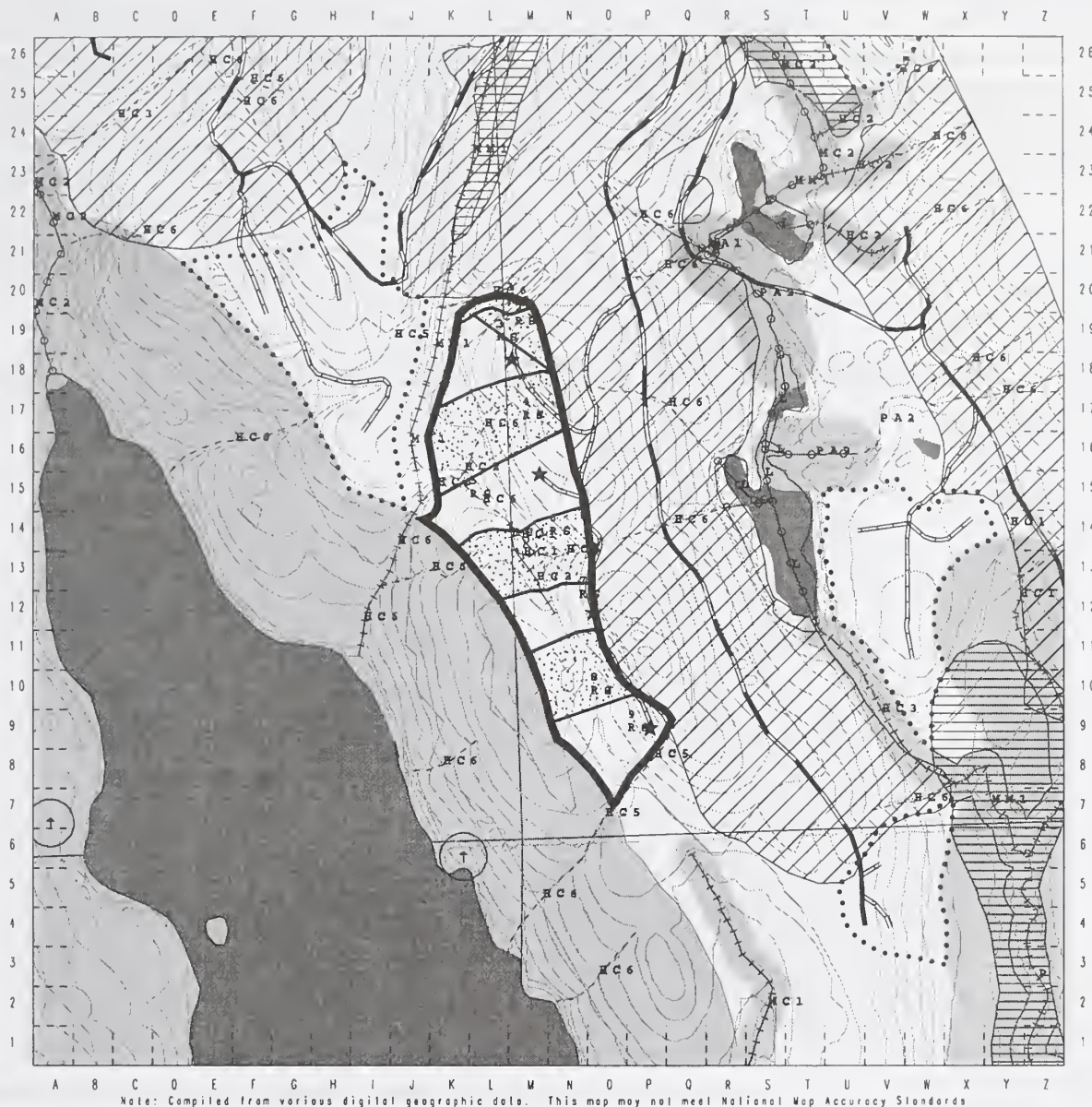
Unit is within 0.5 miles of bald eagle nest. Follow Interagency Agreement. Blasting prohibited within 0.5 mile of nest March 1 through May 31. If nest is determined active, blasting prohibited within 0.5 mile of nest June 1 through August 31.
 Maintain 1000 foot beach buffer.
 Marten guidelines apply: maintain 30% canopy closure, average 8 large trees/acre (20-30"+), average 3 large decadent trees/acre (20-30"+) average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 43

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, /s:/files/rel/library/gis/sealevel/draftcard/draftcard.mxd



<ul style="list-style-type: none"> Class 1 Stream Class 2 Stream Class 3 Stream Section Line Planning Road Unit Boundary Settling Line Contour or Ortho line Other Sealevel 	<ul style="list-style-type: none"> Stream, Beach or Estuary Buffer Private Land Riparian Soil Buffer Body of Water Prior Harvest Deferred from Harvest Mass Movement Index 4 Soil 	<ul style="list-style-type: none"> Low Volume - 0 Medium Volume - 0 High Volume - 23 Unknown Volume - 0 Total Acres - 48 Potential WBF - 795 Quarter Quad - klob4nw VCU Number - 7360 Photo Number - 1390110 Alternative Pattern - 23000 * Landing
--	--	---

LOGGING SYSTEMS Abbrev.

RS Running Skyline
HE Helicopter
HL High Lead
SL Slack Line
SN Shovel Yarding

Projection - Stateplane

0 526 1056 1582 2112 Feet

Eagle Nest

Unit Data Card - Sea Level Draft EIS

Unit Number:	44	Planned Acres:	11.4	Silvicultural Systems:	CC, ITM, DEF	In Alternatives:	2, 3
LUD:	TP	Harvest Acres:	10.6	Management Area:	K35	VCU Number:	7560
Primary Watershed Code:	FA1A	Primary WAA Number:	405	Quad:	ktnb4nw	Photo:	1390-145
Number of Settings:	4	Logging Systems:	RS, SH	Total Estimated Harvest Volume (MBF):		186.3	

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	8.4	Cedar:	0.0	Mixed Hem/Spr:	3.0	Nonforested:	0.0	
Site Productivity Classes	Low:	0.0	Medium:	0.0	High:	11.4	Primary Aspect:				E
Volume Strata	Low:	0.0	Medium:	0.0	High:	11.1	Noncommercial:	0.3			
Visuals	Seen:	0.0	Not Seen:	10.6	Primary ROS Code:						RM
VQOs	PR:	0.0	MM:	10.6	M:	0.0	P:	0.0	R:	0.0	
VAC Rating	Low:	0.0	Intermediate:	11.4	High:	0.0	Roadless:				0.0
Mass Movement Index	Low:	0.0	Medium:	11.4	High:	0.0	Very High:	0.0	Slopes Greater Than 72%:		0.0
Wetland Type											
TLMP High Value Marten Habitat	11.4										

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS: No Concerns

FISH/WATERSHED:

Class III HC6 north: Sideslope S&G buffer plus 100 foot no cut buffer to form unit boundary.

Class II (direct) MM1 east: Greater of 120 foot or RMA (top of sideslope) buffer required.

GEOLOGY:

No concerns.

LANDS:

No concerns.

RECREATION/VISUALS:

No Concerns

SILVICULTURE:

Harvest 2 acres in a group selection, leave unharvested a 1 acre leave island. Harvest remainder of unit (8.4 acres) using individual tree selection to remove targeted trees, reduce levels of misiltoe, and leave a healthy and vigorous stand. Prescription is designed to achieve silvicultural objectives while meeting the Marten standards (see wildlife). Natural regeneration should be adequate. High productivity. CT 10/21/97

SOILS:

No concerns.

TIMBER:

Planned logging system design for this unit is Shovel and Running Skyline. Confirm final road and landing locations.

WILDLIFE:

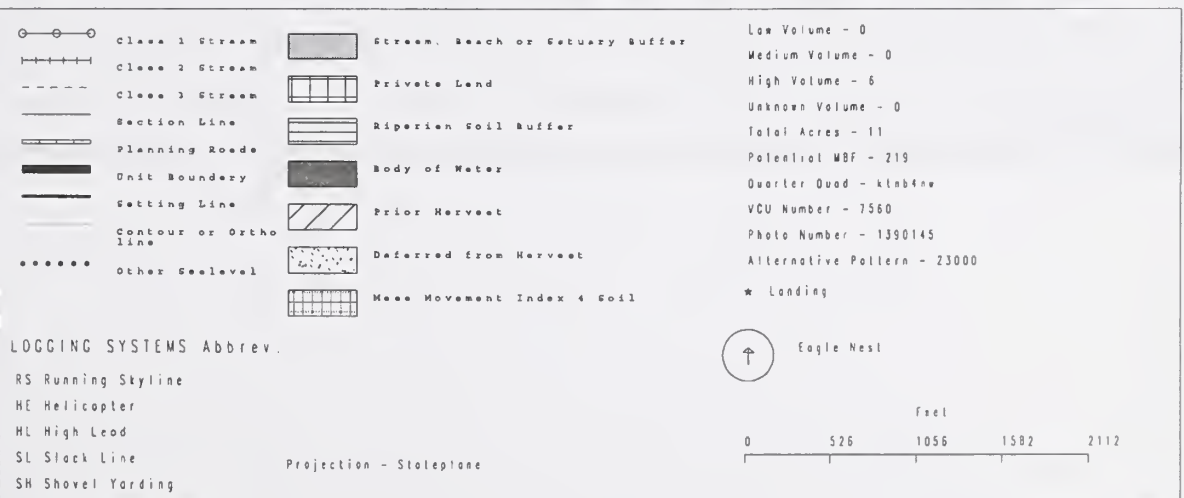
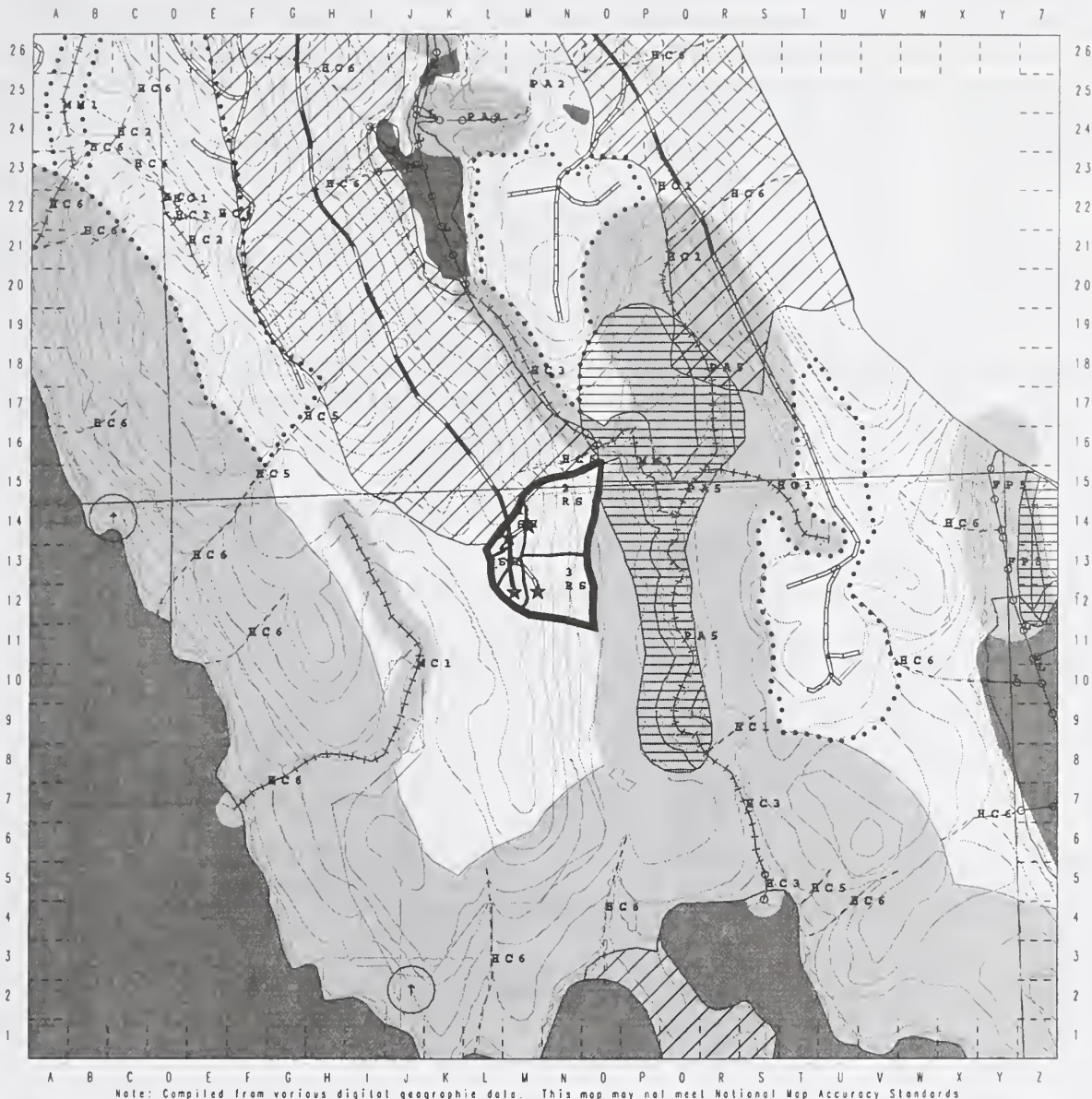
Marten guidelines apply: maintain 30% canopy closure, average 8 large trees/acre (20-30"+), average 3 large decadent trees/acre (20-30"+) average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 44

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, //files/ref/library/gis/sealevel/draftcard/draftcard.mxd



Unit Data Card - Sea Level Draft EIS

Unit Number:	45	Planned Acres:	66.6	Silvicultural Systems:	CC, DEF	In Alternative:	2
LUD:	TP	Harvest Acres:	31.0	Management Area:	K35	VCU Number:	7560
Primary Watershed Code:	EZ8A	Primary WAA Number:	405	Quad:	ktnb4nw	Photo:	1390-108
Number of Settings:	21	Logging Systems:	RS, SH	Total Estimated Harvest Volume (MBF):	922.4		

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	60.3	Cedar:	0.0	Mixed Hem/Spr:	6.3	Nonforested:	0.0	
Site Productivity Classes	Low:	0.0	Medium:	0.0	High:	66.6	Primary Aspect: SE				
Volume Strata	Low:	0.0	Medium:	0.0	High:	66.6	Noncommercial	0.0			
Visuals	Seen:	0.0	Not Seen:	31.0	Primary ROS Code: RM						
VQOs	PR:	0.0	MM:	31.0	M:	0.0	P:	0.0	R:	0.0	
VAC Rating	Low:	0.0	Intermdiate:	39.1	High:	27.5	Roadless:				0.0
Mass Movement Index	Low:	0.0	Medium:	66.6	High:	0.0	Very High:	0.0	Slopes Greater Than 72%:	0.6	
Wetland Type											
TLMP High Value Marten Habitat	66.6										

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS: No Concerns

FISH/WATERSHED:

Class II (direct) HC1 northeast: Greater of 100 foot or RMA (top of V-notch) buffer required.

Class IV HC1 center to east: Split yard or partial suspension required.

Class II (direct) HC4 east: Greater of 100 foot or RMA (top of V-notch) buffer required.

Class II lake east: 100 foot S&G required.

Class I (adfluvial) lake south: 100 foot S&G buffer required.

Class I (adfluvial) PA1 southeast: Greater of 100 foot or RMA (top of V-notch) buffer required.

Class III HC1 (2 each) east: Sideslope S&G buffer.

Class III HC3, PA2 southwest: Sideslope S&G buffer to form unit boundary.

Class III HC3, HC1 west: Sideslope S&G buffer to form unit boundary.

GEOLOGY:

No concerns.

LANDS:

Unit is located along the Misty Fiords National Monument boundary. Will require boundary survey prior to layout.

RECREATION/VISUALS:

This unit not visible from within the National Monument; noise from logging operations may affect recreationists at Third Lake, Big Lake, and along Fish Creek within the Monument

SILVICULTURE:

Highly productive. Use small patch cuts to harvest 31 acres. Leave approximately 35.6 acres unharvested to meet Marten standards (see wildlife). Patches should regenerate naturally. CT 10/21/97

SOILS:

No concerns.

TIMBER:

Planned logging system design for this unit is a small Shovel setting and the remaining are Running Skyline settings. Confirm final road and landing locations.

WILDLIFE:

Marten guidelines apply: maintain 30% canopy closure, average 8 large trees/acre (20-30"+), average 3 large decadent trees/acre (20-30"+) average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 45

Mapscale 1:12000 (5 inch to Mile)

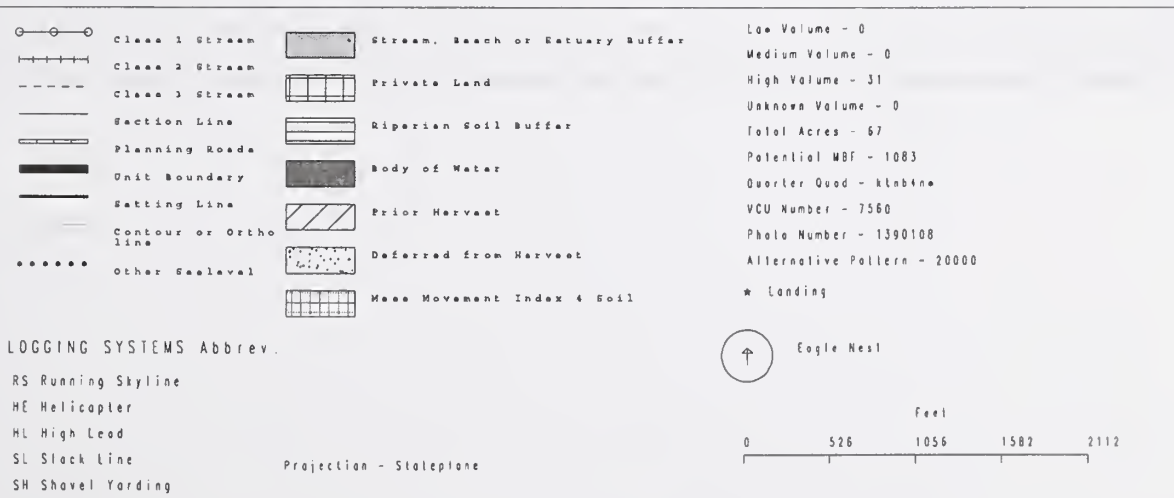
Created 11-17-1997, J:\files\ref\library\gis\sealevel\draftcard\draftcard.mxd



A B C D E F G H I J K L M N O P Q R S T U V W X Y Z



Note: Compiled from various digital geographic data. This map may not meet National Map Accuracy Standards



Unit Data Card - Sea Level Draft EIS

Unit Number:	46	Planned Acres:	23.1	Silvicultural Systems:	CC, ITM, DEF	In Alternative:	2
LUD:	TP	Harvest Acres:	13.4	Management Area:	K35	VCU Number:	7560
Primary Watershed Code:	FA1A	Primary WAA Number:	405	Quad:	ktnb4nw	Photo:	1390-146
Number of Settings:	7	Logging System:	RS	Total Estimated Harvest Volume (MBF):		458.2	

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	10.0	Cedar:	0.0	Mixed Hem/Spr:	13.1	Nonforested:	0.0					
Site Productivity Classes	Low:	0.0	Medium:	0.0	High:	23.1	Primary Aspect:				SSW				
Volume Strata	Low:	0.0	Medium:	0.0	High:	23.1	Noncommercial:	0.0	Primary ROS Code:			RM			
Visuals	Seen:	0.0	Not Seen:	13.4											
VQOs	PR:	0.0	MM:	13.4	M:	0.0	P:	0.0				R:	0.0		
VAC Rating	Low:	0.0	Intermediate:	23.1	High:	0.0	Roadless:					0.0			
Mass Movement Index	Low:	0.0	Medium:	23.1	High:	0.0	Very High:	0.0				Slopes Greater Than 72%:			0.1
Wetland Type															
TLMP High Value Marten Habitat		23.1													

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS: No Concerns

FISH/WATERSHED:

Class I (adfluvial) MC2 west: Greater of 100 foot or RMA (top of V-notch) buffer required.

Class III HC6 northwest: Sideslope S&G buffer to form unit boundary.

Class III HC6 center: Sideslope S&G buffer, split yard or full suspension required.

Class III HC6 south: Sideslope S&G buffer to form unit boundary.

Class II (direct) HC2 south: Greater of 100 foot or RMA (top of V-notch) buffer required.

GEOLOGY:

No concerns.

LANDS:

Unit located along Misty Fiords National Monument boundary. Will require boundary survey prior to layout.

RECREATION/VISUALS:

This unit not visible from within the National Monument; noise from logging operations may affect recreationists at Third Lake, Big Lake, and along Fish Creek within the Monument

SILVICULTURE:

Highly productive. Use small patch cuts to harvest 10 acres. Leave approximately 10.1 acres unharvested to meet Marten standards (see wildlife). Harvest three acres using individual tree selection, prescription is designed to meet silvicultural objectives while meeting the Marten standards. Stand should regenerate naturally. CT 10/21/97

SOILS:

No concerns.

TIMBER:

Planned logging system design for this unit is Running Skyline. Confirm final road and landing locations and possible corridor locations.

WILDLIFE:

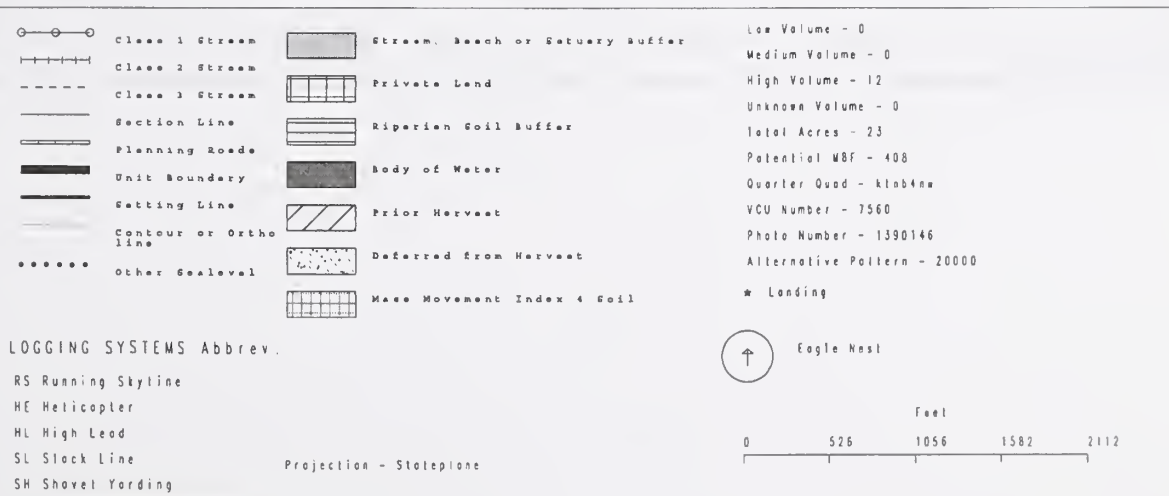
Marten guidelines apply: maintain 30% canopy closure, average 8 large trees/acre (20-30"+), average 3 large decadent trees/acre (20-30"+) average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 46

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, //atlas/rsl/library/gis/sealevel/draftcard/draftcard.mxd



Unit Data Card - Sea Level Draft EIS

Unit Number:	47	Planned Acres:	21.3	Silvicultural Systems:	CC, ITM, DEF	In Alternative:	2
LUD:	TP	Harvest Acres:	13.8	Management Area:	K35	VCU Number:	7560
Primary Watershed Code:	FA1A	Primary WAA Number:	405	Quad:	ktnb4nw	Photo:	1390-145
Number of Settings:	9	Logging Systems:	RS, SH	Total Estimated Harvest Volume (MBF):		368.8	

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	19.5	Cedar:	0.0	Mixed Hem/Spr:	1.8	Nonforested:	0.0
Site Productivity Classes	Low:	0.0	Medium:	0.2	High:	21.2	Primary Aspect:			SE
Volume Strata	Low:	0.0	Medium:	0.1	High:	21.1	Noncommercial:	0.1		
Visuals	Seen:	0.0	Not Seen:	13.8				Primary ROS Code:		RM
VQOs	PR:	0.0	MM:	13.8	M:	0.0	P:	0.0	R:	0.0
VAC Rating	Low:	0.0	Intermediate:	21.3	High:	0.0	Roadless:			0.0
Mass Movement Index	Low:	0.2	Medium:	21.2	High:	0.0	Very High:	0.0	Slopes Greater Than 72%:	0.0
Wetland Type	Forested Wetland:		1.2	Scrub-Shrub Muskeg:		1.4				

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS: No Concerns

FISH/WATERSHED:

Class I (adfluvial) north: 100 foot S&G buffer required.

Class II Lake (adfluvial) west: 100 foot S&G buffer from edge of lake required.

Class I (adfluvial) HC3 west: Greater of 100 foot or RMA (top of V-notch) buffer required.

Class II (direct) HC3 southwest: Greater of 100 foot or RMA (top of V-notch) buffer required.

Class II (direct) HC1 & PA5: Greater of 100 foot or RMA (top of V-notch) buffer required.

GEOLOGY:

No concerns.

LANDS:

No concerns.

RECREATION/VISUALS:

No concerns

SILVICULTURE:

Highly productive. Use small patch cuts to harvest 11 acres. Leave approximately 8 acres unharvested to meet Marten standards (see wildlife). Harvest 2.3 acres using individual tree selection. prescription is designed to achieve silvicultural objectives while meeting the Marten standards. Stand should regenerate naturally CT 10/21/97

SOILS:

The northern edge of this unit contains some small areas of forested wetland and scrub-shrub muskeg wetland (BMP 12.5). Use a low impact logging system on these wetlands which provides at least partial log suspension when yarding (BMP 13.9).

TIMBER:

Planned logging system design for this unit is Shovel and Running Skyline. Confirm final road and landing locations.

WILDLIFE:

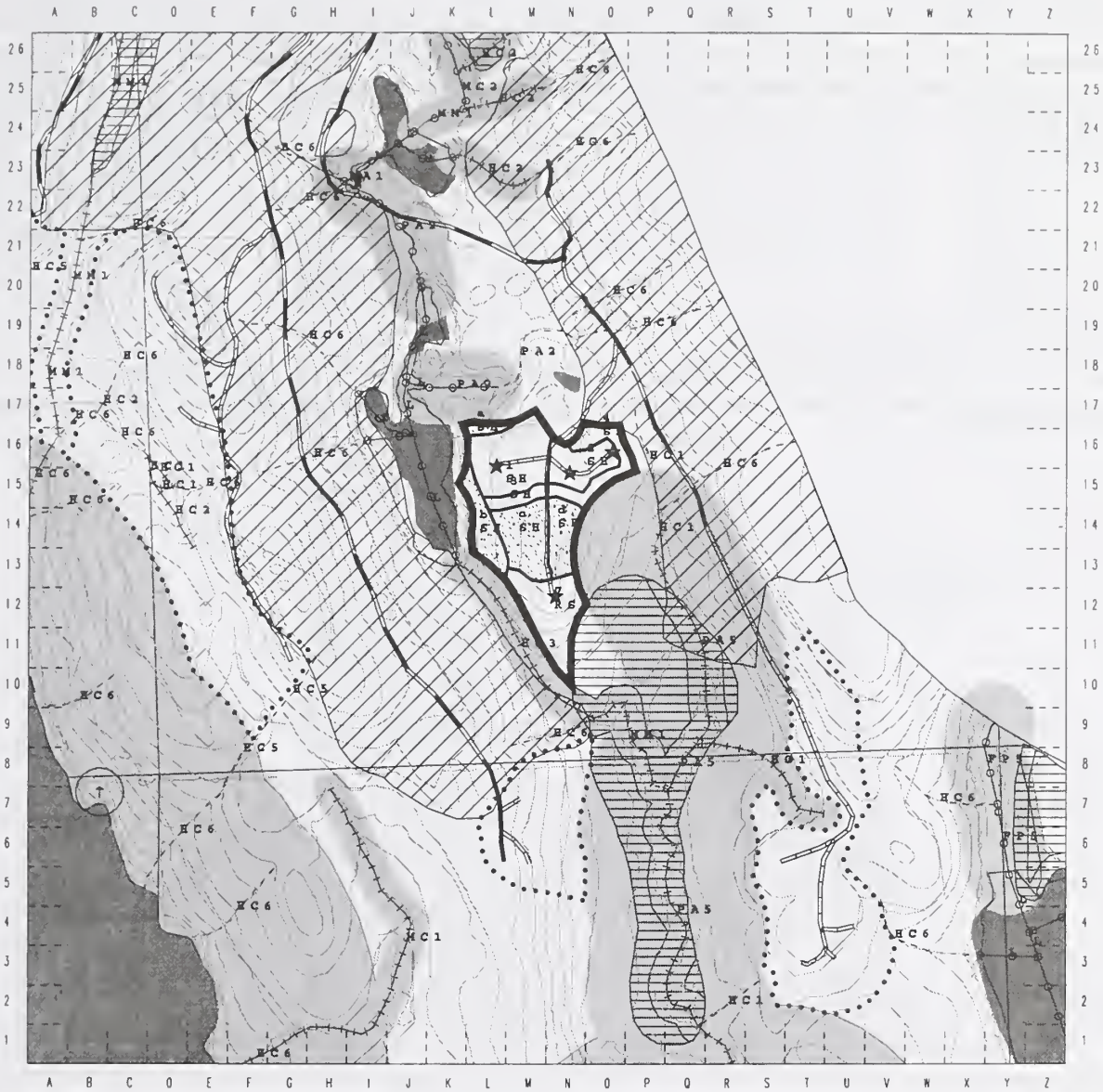
Marten guidelines apply: maintain 30% canopy closure, average 8 large trees/acre (20-30"+), average 3 large decadent trees/acre (20-30"+) average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 47

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, J:\efile\ref\library\gis\sealevel\47\draftcard\draftcard.mxd



Note: Compiled from various digital geographic data. This map may not meet National Map Accuracy Standards

<ul style="list-style-type: none"> Class 1 Stream Class 2 Stream Class 3 Stream Section Line Planning Roads Unit Boundary Settling Line Contour or Ortho line Other Sealevel 	<ul style="list-style-type: none"> Stream, Beach or Estuary Buffer Private Land Riparian Soil Buffer Body of Water Prior Harvest Deferred from Harvest Mass Movement Index 4 Soil 	<ul style="list-style-type: none"> Low Volume - 0 Medium Volume - 0 High Volume - 12 Unknown Volume - 0 Total Acres - 21 Potential WBF - 433 Quarter Quad - klabine VCU Number - 7560 Photo Number - 1390145 Alternative Pattern - 20000 * Landing
---	--	---

LOGGING SYSTEMS Abbrev.

RS Running Skyline
HE Helicopter
HL High Lead
SL Stock Line
SH Shovel Yarding

Projection - Stoleplone

0 526 1056 1582 2112 Feet

Eagle Nest

Unit Data Card - Sea Level Draft EIS

Unit Number:	48	Planned Acres:	27.6	Silvicultural Systems:	CC, ITM, DEF	In Alternatives:	none
LUD:	WR	Harvest Acres:	15	Management Area:	K35	VCU Number:	7550
Primary Watershed Code:	D97A	Primary WAA Number:		Quad:	ktnb4nw	Photo:	1390-144
Number of Settings:	8	Logging Systems:	RS, SH	Total Estimated Harvest Volume (MBF):	445.8		

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	27.6	Cedar:	0.0	Mixed Hem/Spr:	0.0	Nonforested:	0.0	
Site Productivity Classes	Low:	0.0	Medium:	0.0	High:	27.6	Primary Aspect:			SE	
Volume Strata	Low:	0.0	Medium:	0.0	High:	27.6	Noncommercial:	0.0			
Visuals	Seen:	27.6	Not Seen:	0.0						Primary ROS Code:	RM
VQOs	PR:	0.0	MM:	0.0	M:	0.0	P:	0.0	R:	0.0	
VAC Rating	Low:	10.0	Intermediate:	17.6	High:	0.0	Roadless:			19.1	
Mass Movement Index	Low:	0.0	Medium:	27.6	High:	0.0	Very High:	0.0	Slopes Greater Than 72%:	0.0	
Wetland Type											
TLMP High Value Marten Habitat		27.6									

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

ENGINEERING/ROADS: No Concerns

FISH/WATERSHED:

Class II (non-direct) HC1 center west : Greater of 100 foot or RMA (top of V-notch) buffer required.

Class II (non-direct) PA5 west: 100 foot buffer required.

Class II HC1 (non-direct) southwest : Greater of 100 foot or RMA (top of V-notch) buffer required.

Class III HC6: Sideslope S&G buffer to form unit boundary.

GEOLOGY:

No concerns.

LANDS:

Unit is near the Misty Fiords National Monument boundary. A boundary area survey will be required before unit layout.

RECREATION/VISUALS:

SILVICULTURE:

SOILS:

No concerns.

TIMBER:

N/A

WILDLIFE:

Unit is within wildlife connectivity corridor.

Harvest activities restricted to April 1 through November 1 to protect wintering waterfowl area (Low Lake).

Marten guidelines apply: maintain 10-20% of canopy, average 4 large trees/acre (20-30"+), average 3 snags per acre, average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

Saalaval Study Area Unit Schematic - Draft Unit 48

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, /stallion/rs/2/library/gis/sealevel48/draftcard/draftcard.xml



Unit Data Card - Sea Level Draft EIS

Unit Number:	55	Planned Acres:	35.3	Silvicultural Systems:	CC, DEF	In Alternatives:	2, 3, 4, 5
LUD:	TP	Harvest Acres:	26.9	Management Area:	K35	VCU Number:	7530
Primary Watershed Code:	E75A	Primary WAA Number:	405	Quad:	ktnb4nw	Photo:	1390-108
Number of Settings:	11	Logging Systems:	RS, LS	Total Estimated Harvest Volume (MBF):	164.5		

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	6.8	Cedar:	0.0	Mixed Hem/Spr:	28.5	Nonforested:	0.0	
Site Productivity Classes	Low:	0.0	Medium:	0.8	High:	34.5	Primary Aspect: SSW				
Volume Strata	Low:	0.0	Medium:	0.0	High:	35.3	Noncommercial:	0.0	Primary ROS Code: RM		
Visuals	Seen:	20.5	Not Seen:	6.4							
VQOs	PR:	0.0	MM:	26.9	M:	0.0	P:	0.0	R:		0.0
VAC Rating	Low:	10.0	Intermediate:	17.6	High:	0.0	Roadless:				0.0
Mass Movement Index	Low:	0.8	Medium:	34.4	High:	0.2	Very High:	0.0	Slopes Greater Than 72%:		2.5
Wetland Type		Forested Wetland:		3.4							
TLMP High Value Marten Habitat		7.0									

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS: No Concerns

FISH/WATERSHED:

Class II (non-direct) PA1 west: 100 foot S&G buffer required.

Class III HC6 north: Sideslope S&G buffer (top of V-notch) to form unit boundary.

Class III HC6 center to southwest: Sideslope S&G buffer (top of V-notch), split yard or full suspension required.

Class II (non-direct) PA1 south: 100 foot S&G buffer required.

Class III HC5 south: Sideslope S&G buffer to form unit boundary.

GEOLOGY:

No concerns.

LANDS:

No concerns.

RECREATION/VISUALS:

No Concerns

SILVICULTURE:

Highly productive. Use two small clearcuts to harvest 27 acres. Leave approximately 8.3 acres unharvested to meet Marten standards (see wildlife). Patches should regenerate naturally. CT 10/21/97

SOILS:

The eastern end of this unit includes a small area of forested wetlands (BMP 12.5). Use a low impact logging system in this wetland area which provides at least partial log suspension when yarding (BMP 13.9). The planned access road to the southern part of this unit crosses wetlands. It is not preferable to relocate this road to the west, because of steep slopes (BMP 14.2) and the requirement of crossing an AHMU Class III stream (BMP 13.16). This unit contains 2.5 acres of slopes just over 72%. An on-site analysis of these slopes by the IDT soil scientist determined that the risk of potential impacts of accelerated erosion on downslope and downstream fish habitat, other beneficial uses of water and other resources was minimal and they are included within the timber harvest unit (BMP 13.2).

TIMBER:

Planned logging systems design for this unit is Running Skyline and Live Skyline. Confirm final road and landing locations.

WILDLIFE:

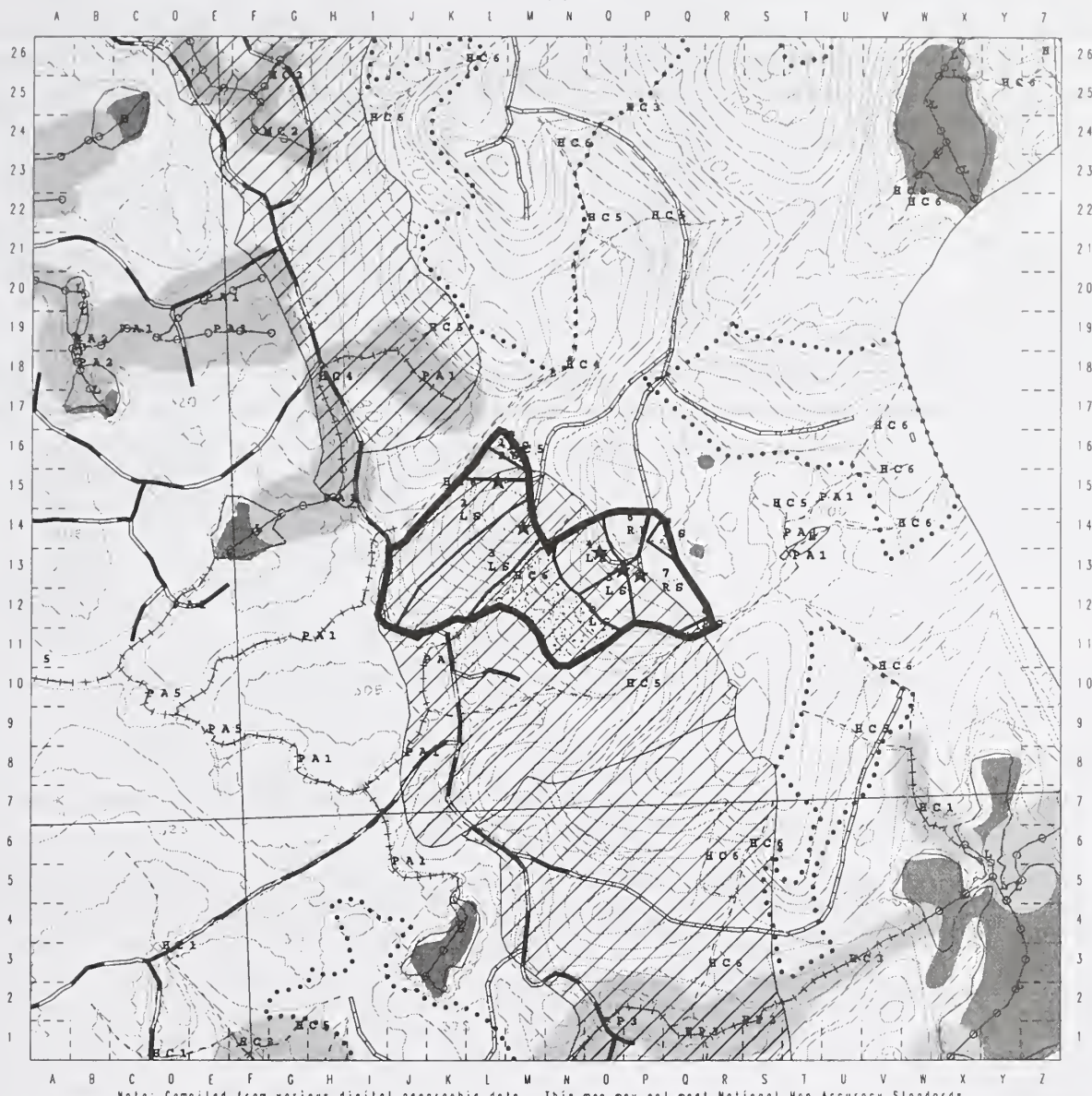
Marten guidelines apply: maintain 10-20% of canopy, average 4 large trees/acre (20-30"+), average 3 snags per acre, average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

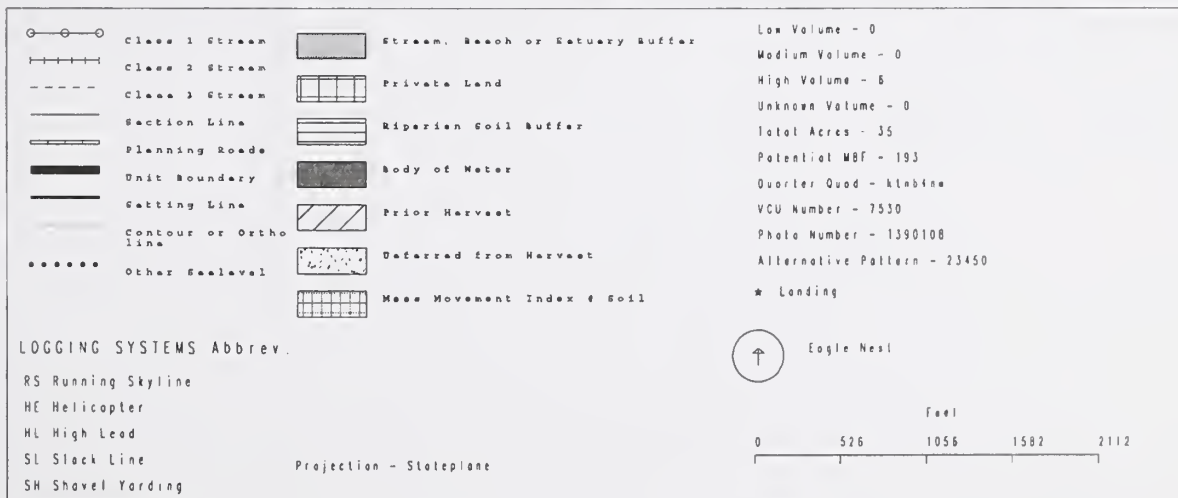
Sealevel Study Area Unit Schematic - Draft Unit 55

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, //s:\files\ref\library\gis\sealevel\draftcard\draftcard.mxd



Note: Compiled from various digital geographic data. This map may not meet National Map Accuracy Standards



Unit Data Card - Sea Level Draft EIS

Unit Number:	56	Planned Acres:	30.6	Silvicultural Systems:	CC, DEF	In Alternatives:	2, 3, 4, 5
LUD:	TP	Harvest Acres:	12.3	Management Area:	K35	VCU Number:	7560
Primary Watershed Code:	E75A	Primary WAA Number:	405	Quad:	ktnb4nw	Photo:	1390-107
Number of Settings:	9	Logging System:	RS	Total Estimated Harvest Volume (MBF):		367.3	

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	30.6	Cedar:	0.0	Mixed Hem/Spr:	0.0	Nonforested:	0.0	
Site Productivity Classes	Low:	0.0	Medium:	30.6	High:	0.0	Primary Aspect:				S
Volume Strata	Low:	0.0	Medium:	0.8	High:	29.8	Noncommercial:	0.0			
Visuals	Seen:	2.8	Not Seen:	9.5					Primary ROS Code:	RM	
VQOs	PR:	0.0	MM:	12.3	M:	0.0	P:	0.0	R:	0.0	
VAC Rating	Low:	0.0	Intermediate:	0.0	High:	30.5	Roadless:				0.0
Mass Movement Index	Low:	0.8	Medium:	29.8	High:	0.0	Very High:	0.0	Slopes Greater Than 72%:	0.3	
Wetland Type			Forested Wetland:	9.7			Scrub-Shrub Muskeg:	1.5			
TLMP High Value Marten Habitat	30.1										

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS:

No Concerns

FISH/WATERSHED:

Class III HC6 (3 each) southeast: Sideslope S&G buffer (top of V-notch), split yard or full suspension required.

GEOLOGY:

No concerns.

LANDS:

This unit is located along the Misty Fiords National Monument boundary. This area will require a boundary survey before the unit is laid out.

RECREATION/VISUALS:

No concerns

SILVICULTURE:

Moderately productive. Use small patch cuts to harvest 12 acres. Leave approximately 18.6 acres unharvested to meet Marten standards (see wildlife). Plant two acres with AYC the remainder of the patches should regenerate naturally. CT 10/21/97

SOILS:

The north and south parts of this unit contain small areas of forested wetland and scrub-shrub muskeg wetland (BMP 12.5). Use a low impact logging system which provides at least partial log suspension when yarding on these wetlands (BMP 13.9). The planned access road could be moved a one hundred feet to the north to avoid these wetlands (BMP 14.2). Avoid the use of these wetlands for disposal of waste material or other fill (BMP 14.19).

TIMBER:

Planned logging system design for this unit is Running Skyline. Confirm final road and landing locations and possible corridor locations.

WILDLIFE:

Marten guidelines apply: maintain 30% canopy closure, average 8 large trees/acre (20-30"+), average 3 large decadent trees/acre (20-30"+) average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 56

Mapscale 1:12000 (5 inch to mile)

Created 11-17-1997, //files/rel/library/gis/sealevel/draftcard/draftcard.mxd



Note: Compiled from various digital geographic data. This map may not meet National Map Accuracy Standards



Unit Data Card - Sea Level Draft EIS

Unit Number:	57	Planned Acres:	69.0	Silvicultural Systems:	CC, DEF	In Alternatives:	2, 3, 4, 5
LUD:	TP	Harvest Acres:	44	Management Area:	K35	VCU Number:	7530
Primary Watershed Code:	E76A	Primary WAA Number:	405	Quad:	ktnb4nw	Photo:	1390-107
Number of Settings:	16	Logging Systems:	RS, LS	Total Estimated Harvest Volume (MBF):		1,281.8	

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	68.9	Cedar:	0.0	Mixed Hem/Spr:	0.1	Nonforested:	0.0
Site Productivity Classes	Low:	0.0	Medium:	27.0	High:	41.9	Primary Aspect: WSW			
Volume Strata	Low:	0.0	Medium:	9.3	High:	59.6	Noncommercial:	0.1		
Visuals	Seen:	44.0	Not Seen:	0.0	Primary ROS Code: RM					
VQOs	PR:	0.0	MM:	44.0	M:	0.0	P:	0.0	R:	0.0
VAC Rating	Low:	0.0	Intermediate:	69.0	High:	0.0	Roadless: 0.0			
Mass Movement Index	Low:	0.0	Medium:	27.0	High:	41.9	Very High:	0.0	Slopes Greater Than 72%:	2.1
Wetland Type			Forested Wetland:	18.3						
TLMP High Value Marten Habitat	60.5									

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS: No Concerns

FISH/WATERSHED:

Class IV HC3 east: Directional felling of trees to form unit boundary.

Class III HC6 center east to south: Split yard or partial suspension required.

Class III HC5 east: Sideslope S&G buffer to form unit boundary.

Class III HC4 southeast: Sideslope S&G buffer to form unit boundary.

Class III HC6 center west: Sideslope S&G buffer to form unit boundary.

GEOLOGY:

High landslide potential. See Soils for mitigation measures..

LANDS:

No concerns.

RECREATION/VISUALS:

No Concerns

SILVICULTURE:

Highly productive. Clearcut harvest 44 acres. Leave approximately 27 acres unharvested to meet Marten standards (see wildlife). Unit should regenerate naturally. CT 10/21/97

SOILS:

Unit contains high landslide potential (MMI=3) soils BMP 13.5). Over 8 acres of these MMI=3 soils have been deferred from timber harvest (BMP 13.1). The northeast part of this unit consists of forested wetlands (BMP 12.5). Recommend the use of a low impact logging system which would provide at least partial log suspension when yarding in these high landslide potential areas and wetlands (BMP 13.9). Roads have been located to avoid these high landslide potential areas (BMP 14.2). Due to the presense of steep slopes and water quality streams in other parts of the unit, these wetlands are the preferred location for the planned access road (BMP 14.2). Use overlay road construction and minimize side ditching, where practicable, to minimize the effect upon groundwater flows in these wetlands (BMPs 12.5 and 14.3). Avoid the use of these wetlands for the disposal of waste material or other fill (BMP 14.19). This unit contains 2.1 acres of slopes greater than 72%, but less than 75%. An on-site analysis of these slopes by the IDT soil scientist determined that the risk of potential impacts of accelerated erosion on downslope and downstream fish habitat, other beneficial uses of water and other resources was minimal and they are included within the timber harvest unit (BMP 13.2)

TIMBER:

Planned logging systems design for this unit is Running Skyline and Live Skyline Yarding. A profile/logging systems analysis will establish split yard or partial suspension on Class III HC6 center east to south as stated in Fish/watershed above. Confirm final road and landing locations.

WILDLIFE:

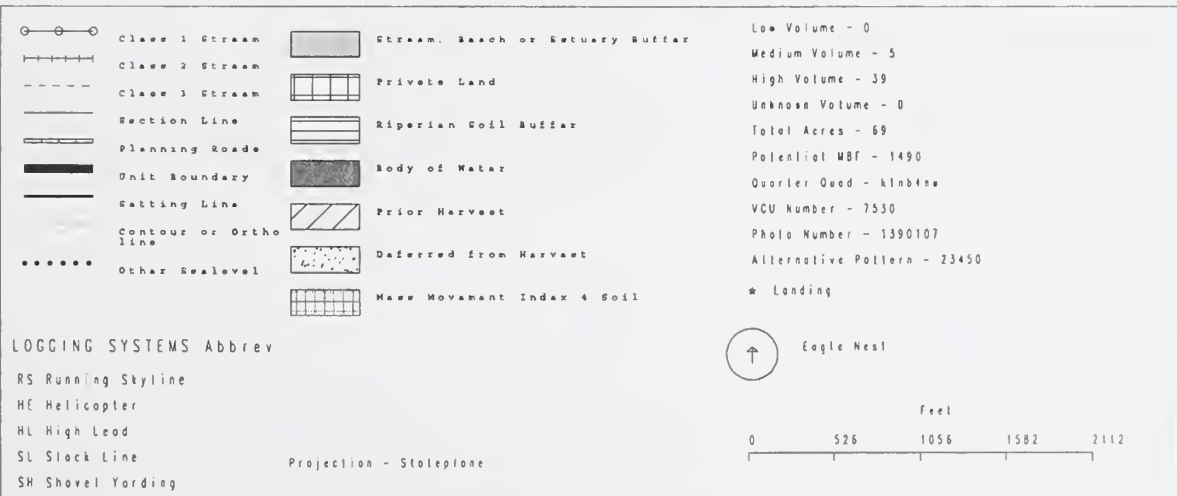
Marten guidelines apply: maintain 30% canopy closure, average 8 large trees/acre (20-30"+), average 3 large decadent trees/acre (20-30"+)average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 57

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, //s://files/rel/library/gis/sealevel/draftcard/draftcard.mxd



Unit Data Card - Sea Level Draft EIS

Unit Number:	59	Planned Acres:	35.6	Silvicultural Systems:	CC, DEF	In Alternative:	2
LUD:	TP	Harvest Acres:	0	Management Area:	K35	VCU Number:	7530
Primary Watershed Code:	E76A	Primary WAA Number:	405	Quad:	ktnb4nw	Photo:	1390-148
Number of Settings:	6	Logging System:	RS	Total Estimated Harvest Volume (MBF):		0	

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	35.6	Cedar:	0.0	Mixed Hem/Spr:	0.0	Nonforested:	0.0
Site Productivity Classes	Low:	0.0	Medium:	35.6	High:	0.0	Primary Aspect:			NE
Volume Strata	Low:	0.0	Medium:	0.0	High:	35.6	Noncommercial	0.0		
Visuals	Seen:	0.0	Not Seen:	35.6	Primary ROS Code:					RM
VQOs	PR:	0.0	MM:	35.6	M:	0.0	P:	0.0	R:	0.0
VAC Rating	Low:	0.0	Intermediate:	0.0	High:	35.6	Roadless:			35.6
Mass Movement Index	Low:	0.0	Medium:	0.0	High:	35.6	Very High:	0.0	Slopes Greater Than 72%:	4.7
Wetland Type	Forested Wetland:			2.3						
TLMP High Value Marten Habitat	35.6									

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS: No Concerns

FISH/WATERSHED:

Class I (adfluvial) lake north: Greater of 100 foot or RMA buffer required.

Class I PA1 north: Greater of 100 foot or RMA buffer required.

Class III HC6 west: Sideslope S&G buffer (top of V-notch), split yard or full suspension required.

Class III HC5 west: Sideslope S&G buffer (top of V-notch), split yard or full suspension required.

GEOLOGY:

This is a high landslide potential unit (MMI=3). (See Soils).

LANDS:

This unit is located on the Misty Fiords National Monument boundary. A boundary survey will be required before this unit is laid out.

RECREATION/VISUALS:

Unit is not visible from within National Monument; noise from logging operations may affect recreationists on Third Lake and Big Lake, and Fish Creek

SILVICULTURE:

Moderately productive. Clearcut harvest 35.6 acres. Stand should regenerate naturally. Harvest deferred on 9 acres to meet Marten standards (see wildlife). CT 10/22/97

SOILS:

4.7 acres of this unit consists of slopes greater than 72%. An on-site analysis of these slopes by the IDT soil scientist determined that the risk of potential impacts of accelerated erosion on downslope and downstream fish habitat, other beneficial uses of water and other resources was minimal and they are included within the timber harvest unit (BMP 13.2). This is a high landslide potential unit (MMI=3) (BMP 13.5). Recommend that a low impact logging system be used in this unit to provide at least partial log suspension when yarding (BMP 13.9) and minimize ground surface disturbance. Roads accessing this unit may require full-bench construction design (BMP 14.7). Minimize the amount of fill slopes on steep, potentially unstable slopes (BMP 14.7). Limit blasting during periods when the soil is saturated (BMP 14.6). A small area of forested wetlands is located in the northeast part of the unit (BMP 12.5). Use a low impact logging system that provides at least partial log suspension on these wetlands (BMP 15.9). Planned roads have been located to avoid these wetlands (BMP 14.2).

TIMBER:

Planned logging system design for this unit is Running Skyline. Confirm final road and landing location.

WILDLIFE:

Marten guidelines apply: maintain 10-20% of canopy, average 4 large trees/acre (20-30"+), average 3 snags per acre, average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 59

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, /atllica/rel/library/gis/sealevel/draftcard/draftcard.mxd



Note: Compiled from various digital geographic data. This map may not meet National Map Accuracy Standards

<ul style="list-style-type: none"> Class 1 Stream Class 2 Stream Class 3 Stream Section Line Planning Roads Unit Boundary Settling Line Contour or Ortho line Other Sealevel 	<ul style="list-style-type: none"> Stream, Beach or Estuary Buffer Private Land Riparian Soil Buffer Body of Water Prior Harvest Deferred from Harvest Mass Movement Index 4 Soil 	<ul style="list-style-type: none"> Low Volume - 0 Medium Volume - 0 High Volume - 0 Unknown Volume - 0 Total Acres - 36 Potential WBF - 0 Quarter Quad - kimbline VCU Number - 7530 Photo Number - 1390148 Alternative Pattern - 20000 * Landing
---	--	---

LOGGING SYSTEMS Abbrev.

RS Running Skyline
HE Helicopter
HL High Lead
SL Slack Line
SH Shovel Yarding

Projection - Stateplane

Eagle Nest

0 526 1056 1582 2112

Feet

Unit Data Card - Sea Level Draft EIS

Unit Number:	60	Planned Acres:	51.8	Silvicultural Systems:	CC, DEF	In Alternatives:	2, 3
LUD:	TP	Harvest Acres:	27.8	Management Area:	K35	VCU Number:	7530
Primary Watershed Code:	E76A	Primary WAA Number:	405	Quad:	ktnb4nw	Photo:	1390-106
Number of Settings:	14	Logging Systems:	RS, SH	Total Estimated Volume (MBF):		827.4	

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	50.9	Cedar:	0.0	Mixed Hem/Spr:	0.9	Nonforested:	0.0
Site Productivity Classes	Low:	0.0	Medium:	0.0	High:	51.8	Primary Aspect: SSW			
Volume Strata	Low:	0.0	Medium:	0.0	High:	51.8	Noncommercial:	0.0		
Visuals	Seen:	0.0	Not Seen:	27.8	Primary ROS Code: RM					
VQOs	PR:	0.0	MM:	5.4	M:	0.0	P:	0.0	R	22.4
VAC Rating	Low:	0.0	Intermediate:	22.7	High:	29.1	Roadless: 0.0			
Mass Movement Index	Low:	0.0	Medium:	51.8	High:	0.0	Very High:	0.0	Slopes Greater Than 72%:	0.0
Wetland Type	Forested Wetland:		0.8							
TLMP High Value Marten Habitat	51.8									

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS: No Concerns

FISH/WATERSHED:

Class I FP4 west: Greater of 130 foot or floodplain RMA buffer required.
 Class I PA5 & FP3 south: Greater of 130 foot or floodplain RMA buffer required.
 Class I HC2 southeast: : Greater of 100 foot or RMA (top of V-notch) buffer required.
 Class I HC1 (2 each) south: : Greater of 100 foot or RMA (top of V-notch) buffer required.
 Class IV HC1 (2 each) south: split yard or partial suspension required.
 Class IV HC2 south and north: split yard or partial suspension required.
 Class III HC2 north: Sideslope S&G buffer (top of V-notch), split yard or full suspension required.

GEOLOGY:

A V-notch is located in the east-central part of this unit (See **Fish/Watershed** and **Soils**).

LANDS:

No concerns.

RECREATION/VISUALS:

No concerns.

SILVICULTURE:

Highly productive. Clearcut harvest 28 acres. Stand should regenerate naturally. Harvest deferred on 24 acres to meet Marten standards (see wildlife). CT 10/22/97

SOILS:

The V-notch located in the east-central part of this unit is a high landslide potential (MMI=1) area (BMP 13.5). Recommend that a slope break buffer be applied to this V-notch and yarding be split on it (BMPs 12.6a and 12.6). A small area of forested wetland is located in the southeast part of the unit (BMP 12.5). Use a low impact logging system that minimizes ground disturbance and provides at least partial log suspension when yarding on these wetlands (BMP 13.9). Roads have been located to avoid these wetlands and V-notch (BMP 14.2).

TIMBER:

Planned logging system design for this unit is Shovel and Running Skyline. Confirm final road and landing locations.

WILDLIFE:

Unit is within wildlife habitat connectivity corridor.

Marten guidelines apply: maintain 10-20% of canopy, average 4 large trees/acre (20-30"+), average 3 snags per acre, average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

Unit Number:	65	Planned Acres:	26.5	Silvicultural Systems:	ITM, DEF	In Alternative:	2
LUD:	TP	Harvest Acres:	15.7	Quad:	ktnb4nw	Photo:	1390-105
Primary Watershed Code:	E76A	Primary WAA Number:	405	Management Area:	K35	VCU Number:	7530
Number of Settings:	3	Logging System:	HE	Total Estimated Harvest Volume (MBF): 233.3			

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	25.7	Cedar:	0.0	Mixed Hem/Spr:	0.8	Nonforested:	0.0	
Site Productivity Classes	Low:	0.0	Medium:	26.5	High:	0.0	Primary Aspect:				W
Volume Strata	Low:	0.0	Medium:	0.0	High:	25.7	Noncommercial	0.8			
Visuals	Seen:	0.0	Not Seen:	15.7						Primary ROS Code:	RM
VQOs	PR:	0.0	MM:	0.0	M:	0.0	P:	0.0	R:	15.7	
VAC Rating	Low:	0.0	Intermediate:	3.9	High:	22.6	Roadless:				0.0
Mass movement Index	Low:	0.0	Medium:	26.2	High:	0.3	Very High:	0.0	Slopes Greater Than 72%:	0.1	
Wetland Type											
TLMP High Value Marten Habitat	25.5										

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO 1/2/96 RAL

ENGINEERING/ROADS: No Concerns

FISH/WATERSHED:

Class I PA5 (3 each) west: Greater of 100 foot or Palustrine RMA buffer required.

Class I FP4 west: Greater of 130 foot or floodplain RMA buffer required

Class I MM2 northwest: Greater of 120 foot or RMA buffer required.

GEOLOGY:

The southern part of this unit is in an area of low vulnerability karst landscape. No specific karst features have been located within this unit, but a potential to find some exists. Resource damage potential associated with land management activities on these areas is not likely to be any greater than those posed by similar activities on non-carbonate bedrock..

LANDS:

No concerns.

RECREATION/VISUALS:

No concerns.

SILVICULTURE:

Helicopter harvest 16 acres using a diameter limit prescription. Defer harvest on 10.5 acres to meet Marten standards (see wildlife). CT 10/21/97

SOILS:

No concerns.

TIMBER:

Planned logging systems design for this unit is Helicopter.

WILDLIFE:

Maintain Old-growth Habitat Reserve south of Unit.

Marten guidelines apply: maintain 10-20% of canopy, average 4 large trees/acre (20-30"+), average 3 snags per acre, average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 65

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, //files/cel/lib/brary/gis/sealevel65/draftcard/draftcard.mxd



- | | | | |
|--|-----------------------|--|---------------------------------|
| | Class 1 Stream | | Stream, Beach or Estuary Buffer |
| | Class 2 Stream | | Private Land |
| | Class 3 Stream | | Riparian Soil Buffer |
| | Section Line | | Body of Water |
| | Planning Road | | Prior Harvest |
| | Unit Boundary | | Deferred from Harvest |
| | Setting Line | | Mass Movement Index 4 Soil |
| | Contour or Ortho line | | |
| | Other Sealevel | | |

Low Volume - 0
 Medium Volume - 0
 High Volume - 8
 Unknown Volume - 0
 Total Acres - 27
 Potential MBF - 274
 Quarter Quad - klnb4w
 VCU Number - 7530
 Photo Number - 1390105
 Alternative Pattern - 20000
 * Landing

LOGGING SYSTEMS Abbrev.

RS Running Skyline
 HE Helicopter
 HL High Lead
 SL Stock Line
 SH Shovel Yarding

Projection - Stateplane



Eagle Nest



Unit Data Card - Sea Level Draft EIS

Unit Number:	66	Planned Acres:	62.0	Silvicultural Systems:	ITM, DEF	In Alternatives:	2, 3, 4, 5
LUD:	TP	Harvest Acres:	36.4	Management Area:	K35	VCU Number:	7530
Primary Watershed Code:	E76A	Primary WAA Number:	405	Quad:	ktnb4nw	Photo:	1390-105
Number of Settings:	8	Logging System:	HE	Total Estimated Harvest Volume (MBF):		542.9	

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	62.0	Cedar:	0.0	Mixed Hem/Spr:	0.0	Nonforested:	0.0	
Site Productivity Classes	Low:	0.0	Medium:	14.7	High:	47.3	Primary Aspect:				S
Volume Strata	Low:	0.0	Medium:	0.0	High:	62.0	Noncommercial:	0.0			
Visuals	Seen:	27.0	Not Seen:	9.4					Primary ROS Code:	RM	
VQOs	PR:	0.0	MM:	36.4	M:	0.0	P:	0.0	R:	0.0	
VAC Rating	Low:	9.7	Intermediate:	27.7	High:	24.6	Roadless:				35.3
Mass Movement Index	Low:	0.0	Medium:	14.7	High:	47.3	Very High:	0.0	Slopes Greater Than 72%:	3.2	
Wetland Type		Riparian Forest:			3.2						
TLMP High Value Marten Habitat		62.0									

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO 1/2/96 RAL

ENGINEERING/ROADS: No Concerns

FISH/WATERSHED:

Class III HC5 northwest: Sideslope S&G buffer to form unit boundary.
 Class I HC2 west: Greater of 100 foot or RMA (top of V-notch) buffer required.
 Class I MM1 southwest: Greater of 120 foot or RMA (top of sideslope) buffer required.
 Class I FP4 south: Greater of 130 foot or floodplain RMA buffer required.
 Class I MM2 southeast: Greater of 120 foot or RMA (top of sideslope) buffer required.
 Class III HC2 east: Sideslope S&G buffer to form unit boundary.

GEOLOGY:

Unit is located in an area of low vulnerability karst landscape. No specific karst features have been identified in this unit but there is a potential. Resource damage potential associated with land management activities in the area is not likely to be any greater than those posed by similar activities on non-carbonate bedrock. Parts of this unit are underlain by erodible deposits of volcanic ash and cinder. Minimize the amount of cut slopes and ground disturbance where possible. The upper part of this unit contains high landslide potential (MMI=3) soils (BMP 13.5). See SOILS for mitigation measures.

LANDS: No concerns.

RECREATION/VISUALS: No concerns.

SILVICULTURE:

Helicopter harvest 37 acres using a diameter limit prescription. Defer harvest on 25 acres to meet Marten standards (see wildlife). CT 10/21/97

SOILS:

3.2 acres of this unit consists of slopes greater than 72%. An on-site analysis of these slopes by the IDT soil scientist determined that the risk of potential impacts of accelerated erosion on downslope and downstream fish habitat, other beneficial uses of water and other resources was minimal and they are included within the timber harvest unit (BMP 13.2). The upper part of this unit contains high landslide potential soils (MMI=3) (BMP 13.5). Over 10 acres of the MMI=3 soils were deferred from timber harvest (BMP 13.1). The lower part of this unit includes a small area of riparian forest wetland (BMP 12.5). Helicopter yarding is a low impact logging systems which minimizes ground surface disturbance and provides full log suspension when yarding (BMP 13.9) on these wetlands and high landslide potential soils. Road construction on wetlands and high landslide potential areas was avoided by helicopter logging this unit (BMPs 12.5, 13.5 and 14.1).

TIMBER: Planned logging systems design for this unit is Helicopter.

WILDLIFE:

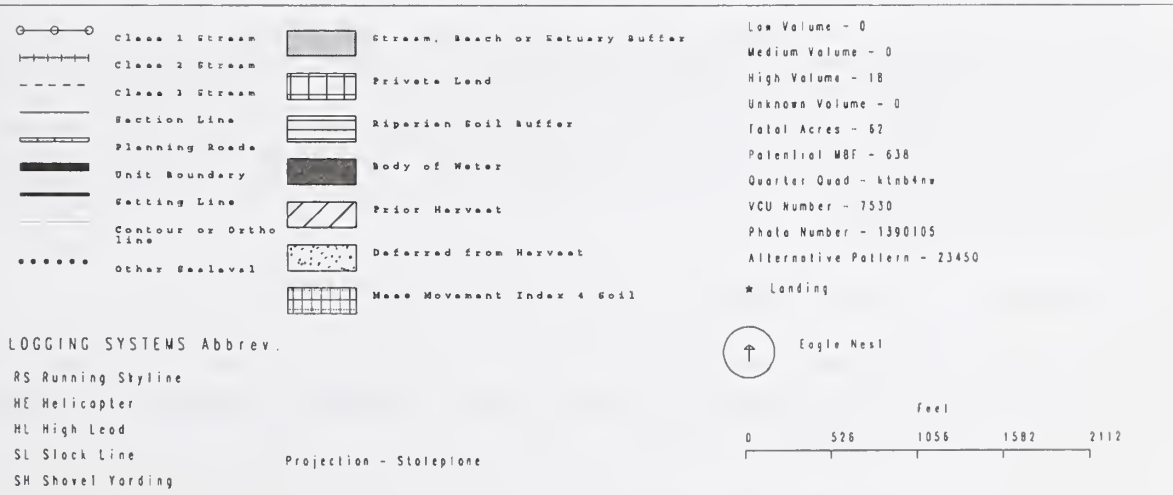
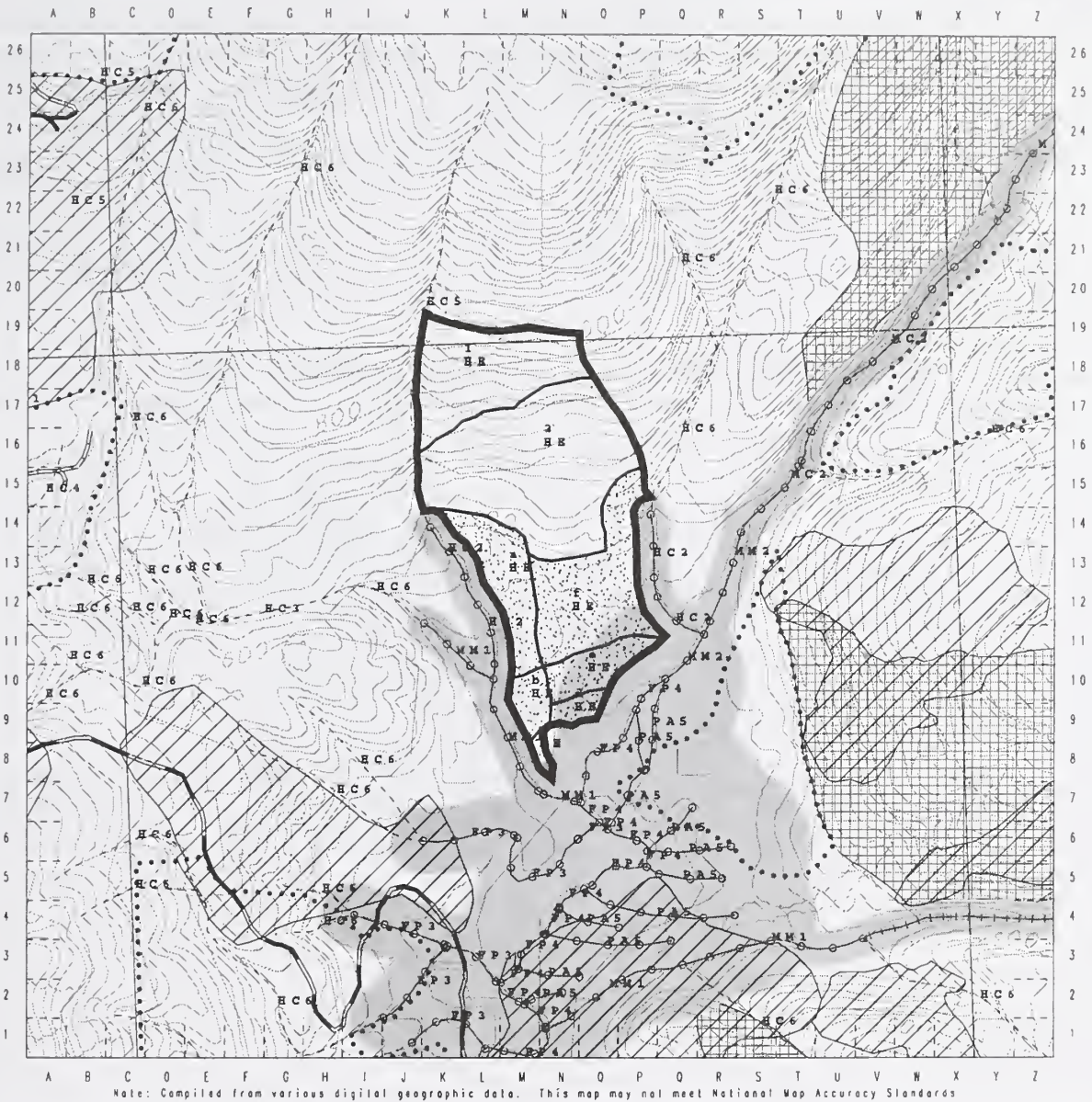
Marten guidelines apply: maintain 10-20% of canopy, average 4 large trees/acre (20-30"+), average 3 snags per acre, average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 66

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, //sfiles/rel/library/gis/sealevel/draftcard/draftcard.mxd



Unit Data Card - Sea Level Draft EIS

Unit Number:	67	Planned Acres:	63.4	Silvicultural Systems:	CC, DEF	In Alternatives:	2, 3, 4, 5
LUD:	TP	Harvest Acres:	46.3	Management Area:	K35	VCU Number:	7530
Primary Watershed Code:	E76A	Primary WAA Number:	405	Quad:	ktnb4nw	Photo:	1390-105
Number of Settings:	12	Logging Systems:	RS, SH	Total Estimated Harvest Volume (MBF): 1,340.3			

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	63.2	Cedar:	0.0	Mixed Hem/Spr:	0.2	Nonforested:	0.0
Site Productivity Classes	Low:	5.4	Medium:	3.1	High:	54.9	Primary Aspect: SSE			
Volume Strata	Low:	0.0	Medium:	18.4	High:	44.8	Noncommercial:	0.2		
Visuals	Seen:	37.4	Not Seen:	8.9	Primary ROS Code: RM					
VQOs	PR:	0.0	MM:	46.3	M:	0.0	P:	0.0	R:	0.0
VAC Rating	Low:	0.0	Intermediate:	61.0	High:	2.4	Roadless: 0.0			
Mass Movement Index	Low:	5.6	Medium:	54.9	High:	3.1	Very High:	0.0	Slopes Greater Than 72%:	1.3
Wetland Type	Forested Wetland:		9.9	Short Sedge Meadow:		0.6	Scrub-Shrub Muskeg: 0.1			
TLMP High Value Marten Habitat	45.0									

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96. RAL

ENGINEERING/ROADS: No Concerns

FISH/WATERSHED:

Class IV HC5 (4 each) northwest: Split yard or partial suspension required.
 Class III HC2 northwest: Sideslope S&G buffer (top of V-notch), split yard or full suspension required
 Class III HC5 northwest: Sideslope S&G buffer (top of V-notch), split yard or full suspension required
 Class II (non-direct) HC1 northwest: Greater of 100 foot or RMA (top of V-notch) buffer required.
 Class II (non-direct) PA1 west: Greater of 100 foot or RMA buffer required.
 Class II lake south: Greater of 100 foot or RMA buffer required.
 Class III HC6 south: Sideslope S&G buffer (top of V-notch) to form unit boundary.
 Class III HC4 southeast: Sideslope S&G buffer (top of V-notch), split yard or full suspension required.
 Class IV HC1 east: Split yard or partial suspension required.

GEOLOGY:

This unit is located in an area of low vulnerability karst landscape. No specific karst features have been identified in this unit, but there is a potential to find them. Resource damage potential associated with land management activities in this area is not likely to be any greater than those posed by similar activities on non-carbonate bedrock. Much of this unit is underlain by erodible deposits of volcanic ash and cinder. Several small caves have been eroded out of the volcanic ash deposits in the vicinity of this unit. There is at least one cave located near the eastern unit boundary. Recommend that no logging or road construction take place within 200 feet of the cave entrance.

LANDS:

No concerns.

RECREATION/VISUALS: No concerns.

SILVICULTURE:

Highly productive. Clearcut harvest 46 acres. Plant 4 acres with AYC the remainder of the stand should regenerate naturally. Harvest deferred on 18 acres to meet Marten standards (see wildlife). The unit has Sensitive plant concerns specifically *Listera Convallarioides*, 2 populations are in deferral areas consider placing a small deferral area over the souther 3 populations, see resource report. CT 10/22/97

SOILS:

A small area of forested wetland is located in the north-central part of this unit (BMP 12.5). Use a low impact logging system which minimizes ground disturbance and provides at least partial log suspension when yarding these wetlands (BMP 13.9). Use overlay road construction and minimize side ditching, where practicable, to minimize the effects upon groundwater flow (BMPs 12.5 and 14.3). Avoid the use of these wetland for disposal of waste material or other fill (BMP 14.19). About three acres of high landslide potential soils within the unit boundary have been placed in deferral areas (BMP 13.1). About an acre of slopes greater than 72% are in this unit. An on-site analysis of these slopes by the IDT soil scientist determined that the risk of potential impacts of accelerated erosion on downslope and downstream fish habitat, other beneficial uses of water and other resources was minimal and they are included within the timber harvest unit (BMP 13.2). 1.6 acres of slopes greater than 72% are in this unit. An on-site analysis of these slopes by the IDT soil scientist determined that the risk of potential impacts of accelerated erosion on downslope and downstream fish habitat, other beneficial uses of water and other resources was minimal and they are included within the timber harvest unit (BMP 13.2).

TIMBER:

Planned logging system design for this unit is Shovel and Running Skyline. Confirm final road and landing locations.

WILDLIFE:

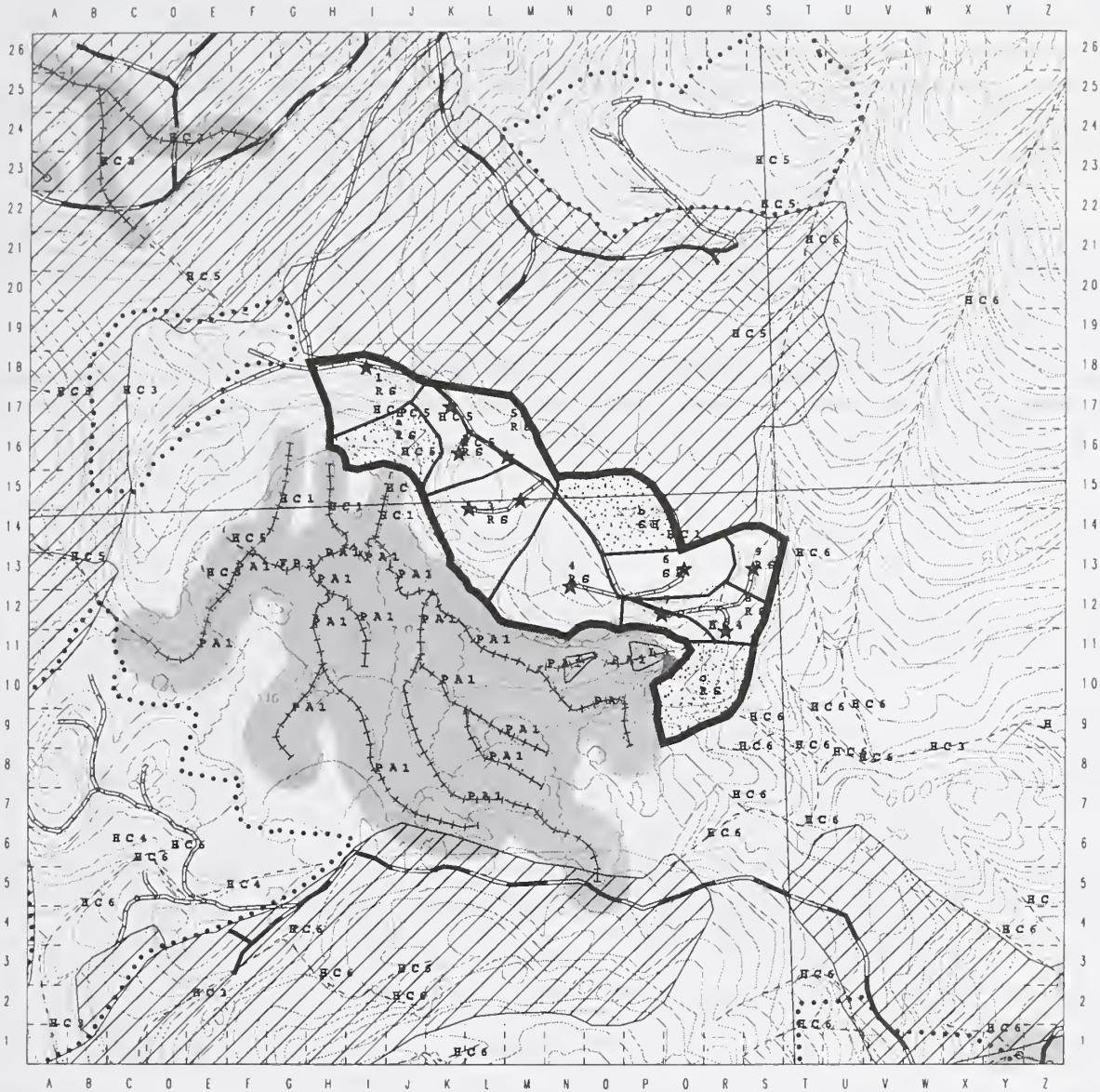
Marten guidelines apply: maintain 10-20% of canopy, average 4 large trees/acre (20-30"+), average 3 snags per acre, average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

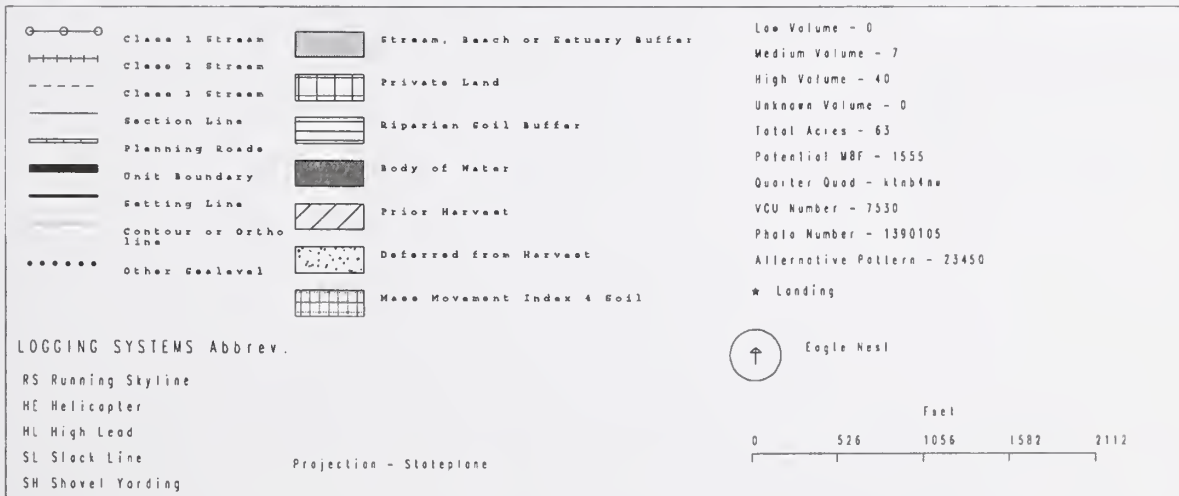
Sealevel Study Area Unit Schematic - Draft Unit 67

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, //files/cut/library/gis/sealevel/draftcard/draftcard.mxd



Note: Compiled from various digital geographic data. This map may not meet National Map Accuracy Standards



Unit Data Card - Sea Level Draft EIS

Unit Number:	68	Planned Acres:	20.3	Silvicultural Systems:	CC, DEF	In Alternatives:	2, 3, 4, 5
LUD:	TP	Harvest Acres:	14.9	Management Area:	K35	VCU Number:	7530
Primary Watershed Code:	E77A	Primary WAA Number:	405	Quad:	ktnb4nw	Photo:	1390-85
Number of Settings:	4	Logging System:	RS	Total Estimated Harvest Volume (MBF):		323.0	

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	0.0	Cedar:	0.0	Mixed Hem/Spr:	20.3	Nonforested:	0.0	
Site Productivity Classes	Low:	0.0	Medium:	0.0	High:	20.3	Primary Aspect:				W
Volume Strata	Low:	0.0	Medium:	0.0	High:	13.4	Noncommercial:	6.9			
Visuals	Seen:	0.0	Not Seen:	14.9					Primary ROS Code:	RM	
VQOs	PR:	0.0	MM:	14.9	M:	0.0	P:	0.0	R:	0.0	
VAC Rating	Low:	0.0	Intermediate:	20.3	High:	0.0	Roadless:				0.0
Mass Movement Index	Low:	0.0	Medium:	20.3	High:	0.0	Very High:	0.0	Slopes Greater Than 72%:	1.6	
Wetland Type	Forested Wetland:		4.4								
TLMP High Value Marten Habitat	14.8										

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS: No Concerns

FISH/WATERSHED:

No concerns

GEOLOGY:

Parts of this unit are underlain by carbonate bedrock. No karst features were found in field reconnaissance. The potential to find significant cave resources in this unit is considered to be low.

LANDS:

RECREATION/VISUALS: No concerns.

SILVICULTURE:

Highly productive. Clearcut harvest 15 acres. Plant 2 acres with AYC the remainder of the stand should regenerate naturally. Harvest deferred on 5.3 acres to meet Marten standards (see wildlife). CT 10/22/97

SOILS:

Forested wetlands are found along the southeast edge of this unit (BMP 12.5). Recommend the use of a low impact logging system on these wetlands, which minimizes ground disturbance and provides at least partial log suspension when yarding (BMP 13.9). The access road has been located to minimize the amount of wetland affected (BMP 14.2). Recommend that overlay road construction and minimal side ditching be used, where practicable, to minimize the effects upon groundwater flow and alteration of wetness (BMPs 12.5 and 14.3).

TIMBER:

Planned logging system design for this unit is Running Skyline. Confirm final road and landing locations.

WILDLIFE:

Marten guidelines apply: maintain 10-20% of canopy, average 4 large trees/acre (20-30"+), average 3 snags per acre, average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

Unit Number:	69	Planned Acres:	65.5	Silvicultural Systems:	CC, DEF	In Alternatives:	2, 3, 4, 5
LUD:	TP	Harvest Acres:	39.3	Management Area:	K35	VCU Number:	7530
Primary Watershed Code:	E76A	Primary WAA Number:	405	Quad:	ktnb4nw	Photo:	1390-84
Number of Settings:	13	Logging Systems:	RS, LS	Total Estimated Harvest Volume (MBF): 1,074.9			

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	60.2	Cedar:	0.0	Mixed Hem/Spr:	5.3	Nonforested:	0.0
Site Productivity Classes	Low:	0.0	Medium:	0.0	High:	0.0	Primary Aspect:			
Volume Strata	Low:	6.1	Medium:	5.8	High:	52.0	Noncommercial:	1.6		
Visuals	Seen:	1.9	Not Seen:	37.4	Primary ROS Code: RM					
VQOs	PR:	0.0	MM:	39.3	M:	0.0	P:	0.0	R:	0.0
VAC Rating	Low:	0.0	Intermediate:	0.0	High:	0.0	Roadless:			0.0
Mass Movement Index	Low:	10.8	Medium:	54.7	High:	0.0	Very High:	0.0	Slopes Greater Than 72%:	1.6
Wetland Type	Forested Wetland:		14.0		Scrub-Shrub Muskeg:		9.7		Short Sedge Meadow:	
TLMP High Value Marten Habitat	60.0									

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS: No Concerns

FISH/WATERSHED:

Class III HC5 north: Sideslope S&G buffer (top of V-notch) to form unit boundary.

Class IV HC4 center: Split yard or partial suspension required.

Class III HC4 east to center: Sideslope S&G buffer (top of V-notch), split yard or full suspension required.

Class III HC6 center to southwest: Sideslope S&G buffer (top of V-notch), split yard or full suspension required.

Class III HC3 southwest to south: Sideslope S&G buffer (top of V-notch), split yard or full suspension required.

GEOLOGY:

Much of the northern part of this unit is underlain by carbonate bedrock. The southern part of the unit is underlain by erodible deposits of volcanic ash and cinder. The potential to find significant karst resources in this unit is considered to be low.

A small cave, eroded into the volcanic ash deposits, is located near the southeast unit boundary. Recommend that a 100-foot buffer be placed around the entrance of this cave.

LANDS:

RECREATION/VISUALS: No concerns.

SILVICULTURE:

Highly productive. Clearcut harvest 39.3 acres. Stand should regenerate naturally. Harvest deferred on 26.2 acres to meet Marten standards (see wildlife). CT 10/22/97

SOILS:

The central part of this unit contains forested wetlands. The southeast unit boundary includes an area of scrub-shrub muskeg wetland. The unit is bordered on the east by short sedge meadow (BMP 12.5). Roads have been located within this unit to avoid these wetlands to the maximum extent practical (BMP 14.2). Road construction on these wetlands should use overlay construction with minimal side ditching, where practical, to minimize the effects upon groundwater flow (BMP 14.3). Avoid the use of these wetlands as disposal sites for overburden or other fill (BMP 14.19). 1.6 acres of slopes greater than 72% are in this unit. An on-site analysis of these slopes by the IDT soil scientist determined that the risk of potential impacts of accelerated erosion on downslope and downstream fish habitat, other beneficial uses of water and other resources was minimal and they are included within the timber harvest unit (BMP 13.2).

TIMBER:

Planned logging system design for this unit is Running Skyline. Confirm final road and landing locations.

WILDLIFE:

Marten guidelines apply: maintain 10-20% of canopy, average 4 large trees/acre (20-30"+), average 3 snags per acre, average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

Unit Number:	71	Planned Acres:	42.5	Silvicultural Systems:	CC, DEF	In Alternatives:	2, 3, 4, 5
LUD:	TP	Harvest Acres:	32.7	Management Area:	K35	VCU Number:	7530
Primary Watershed Code:	E76A	Primary WAA Number:	405	Quad:	ktnb4nw	Photo:	1390-104
Number of Settings:	10	Logging Systems:	RS, SH	Total Estimated Harvest Volume (MBF):	1,244.1		

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	24.6	Cedar:	0.0	Mixed Hem/Spr:	17.9	Nonforested:	0.0
Site Productivity Classes	Low:	0.0	Medium:	13.1	High:	29.4	Primary Aspect: SSW			
Volume Strata	Low:	0.0	Medium:	18.4	High:	24.1	Noncommercial:	0.0	Primary ROS Code: RM	
Visuals	Seen:	26.6	Not Seen:	6.1	P: 0.0					
VQOs	PR:	0.0	MM:	32.7	M:	0.0	P:	0.0	R:	0.0
VAC Rating	Low:	0.0	Intermediate:	42.5	High:	0.0	Roadless: 0.2			
Mass Movement Index	Low:	13.1	Medium:	6.0	High:	23.5	Very High:	0.0	Slopes Greater Than 72%:	2.1
Wetland Type	Forested Wetland:			7.1						
TLMP High Value Marten Habitat	22.5									

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO 1/2/96 RAL

ENGINEERING/ROADS: No Concerns

FISH/WATERSHED:

Class IV HCS and HC3 east: Split yard or partial suspension required.

GEOLOGY:

Low karst vulnerability area. No specific karst features have been located within this harvest unit, but the potential to find them is high. Resource damage potential associated with land management activities in this area are greater than those posed by similar activities on low or moderate vulnerability karst lands. If significant karst features are found within this unit, appropriate mitigation measures will be applied.

LANDS:

No concerns.

RECREATION/VISUALS: No concerns.

SILVICULTURE:

Highly productive. Clearcut harvest 32.5 acres. Stand should regenerate naturally. Harvest deferred on 10 acres to meet Marten standards (see wildlife). CT 10/22/97

SOILS:

The east part of this unit contains high landslide potential (MMI=3) soils (BMP 13.5). A small part of the MMI=3 soils, 3.7 acres, have been placed in deferral areas (BMP 13.1). Roading on these steep, potentially unstable slopes may require full-bench design (BMP 14.7). Avoid fill slopes on high landslide potential areas (BMP 14.7). Limit blasting for road construction when the soil is saturated (BMP 14.6). The southwest part of the unit includes an area of forested wetland (BMP 12.5). Recommend the use of a low impact logging system which minimizes ground surface disturbance and provides at least partial log suspension when yarding (BMP 13.9) on these high landslide potential and wetland areas. Use overlay road construction and minimize side ditching, where practicable, to minimize the effects upon groundwater and alteration of wetness (BMPs 12.5 and 14.3). Avoid the use of these wetlands for the disposal of overburden or other fill material (BMP 14.19). 2.1 acres of this unit consists of slopes greater than 72%. An on-site analysis of these slopes by the IDT soil scientist determined that the risk of potential impacts of accelerated erosion on downslope and downstream fish habitat, other beneficial uses of water and other resources was minimal and they are included within the timber harvest unit (BMP 13.2).

TIMBER:

Planned logging system design for this unit is Running Skyline. Confirm final road and landing locations.

WILDLIFE:

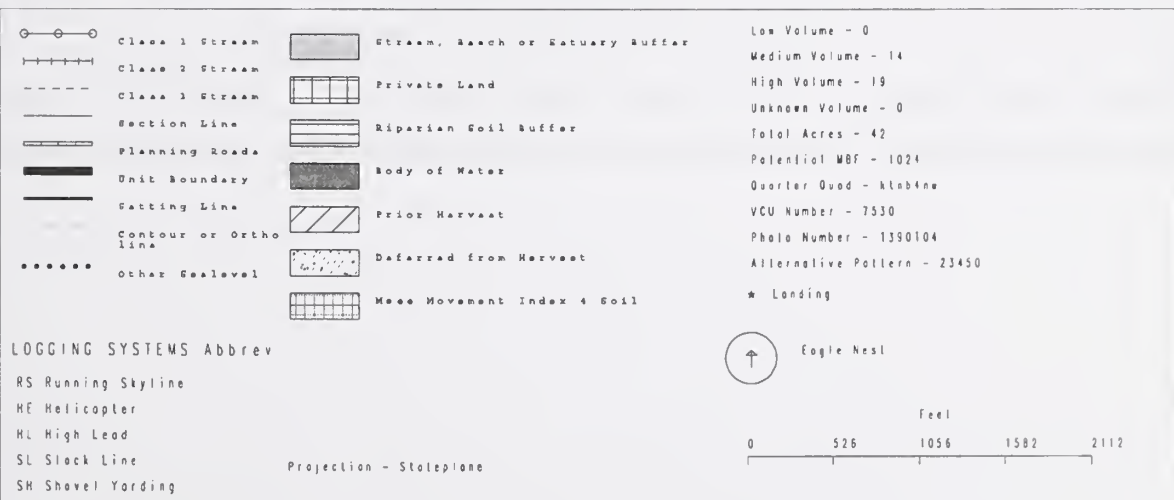
Marten guidelines apply: maintain 10-20% of canopy, average 4 large trees/acre (20-30"+), average 3 snags per acre, average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 71

Mapscale 1:12000 (5 inch to Mile)

Created: 11-17-1997, /s/fields/rel/library/gis/sealevel/draftcard/draftcard.mxd



Unit Data Card - Sea Level Draft EIS

Unit Number: 72	Planned Acres: 37.1	Silvicultural Systems: CC, DEF	In Alternatives: 2, 3, 4, 5
LUD: TP	Harvest Acres: 25.9	Management Area: K35	VCU Number: 7530
Primary Watershed Code: D96A	Primary WAA Number: 405	Quad: ktnb4nw	Photo: 1390-85
Number of Settings: 10	Logging System: RS	Total Estimated Harvest Volume (MBF): 734.3	

PHYSICAL DESCRIPTION

Forest Type	Spruce: 0.0	Hemlock: 37.0	Cedar: 0.0	Mixed Hem/Spr: 0.1	Nonforested: 0.0
Site Productivity Classes	Low: 0.0	Medium: 0.9	High: 36.2	Primary Aspect: WSW	
Volume Strata	Low: 0.0	Medium: 8.5	High: 28.5	Noncommercial: 0.1	
Visuals	Seen: 0.0	Not Seen: 25.9	Primary ROS Code: RM		
VQOs	PR: 0.0	MM: 25.9	M: 0.0	P: 0.0	R: 0.0
VAC Rating	Low: 0.0	Intermediate: 37.1	High: 0.0	Roadless: 0.0	
Mass Movement Index	Low: 0.0	Medium: 26.50	High: 10.7	Very High: 0.0	Slopes Greater Than 72%: 5.4
Wetland Type	None				
TLMP High Value Marten Habitat	28.6				

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO 1/2/96 RAL

ENGINEERING/ROADS: No Concerns

FISH/WATERSHED:

Class II (direct) MM2 west: Greater of 120 foot or RMA buffer required.

Class II (direct) MC2 southwest: Greater of 100 foot or RMA (top of sideslope) required.

Class III HC6 south: Sideslope S&G buffer (top of V-notch), split yard or full suspension required.

GEOLOGY:

High landslide potential. See Soils for mitigation measures. Low vulnerability karst area. Resource damage potential associated with land management activities in the area is not likely to be any greater than those posed by similar activities on non-carbonate bedrock. Parts of this unit are underlain by carbonate bedrock, limestone and marble. No karst features were found during unit recon. If significant karst features are found in this unit, appropriate mitigation measures described in Forest Plan Standards and Guidelines will be applied.

LANDS:

No concerns.

RECREATION/VISUALS: No concerns.

SILVICULTURE:

Highly productive. Clearcut harvest 25.9 acres. Stand should regenerate naturally. Harvest deferred on 11.2 acres to meet Marten standards(see wildlife). CT 10/22/97

SOILS:

This unit include high landslide (MMI=3) potential areas (BMP 13.5). Three acres of these MMI=3 areas have been deferred from timber harvest (BMP 13.1). Use a low impact logging system which minimizes ground disturbance and provides at least partial log suspension when yarding on these high landslide potential sites (BMP 13.9). Roads have been located in this unit to avoid these high landslide potential areas (BMP 14.2). This unit contains 5.4 acres of land greater than 72% slope. An on-site analysis of these slopes by the IDT soil scientist determined that the risk of potential impacts of accelerated erosion on downslope and downstream fish habitat, other beneficial uses of water and other resources was minimal and they are included within the timber harvest unit (BMP 13.2).

TIMBER:

Planned logging system design for this unit is Running Skyline. Confirm final road and landing locations.

WILDLIFE:

Marten guidelines apply: maintain 10-20% of canopy, average 4 large trees/acre (20-30"+), average 3 snags per acre, average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 72

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, //files/rel/library/gis/sealevel/draftcard/draftcard.mxd



Note: Compiled from various digital geographic data. This map may not meet National Map Accuracy Standards

	Class 1 Stream		Stream, beach or estuary buffer
	Class 2 Stream		Private Land
	Class 3 Stream		Riparian Soil Buffer
	Section Line		Body of Water
	Planning Roads		Prior Harvest
	Unit Boundary		Deferred from Harvest
	Settling Line		Mass Movement Index 4 Soil
	Contour or Ortho line		
	Other Sealevel		

Low Volume - 0
 Medium Volume - 7
 High Volume - 19
 Unknown Volume - 0
 Total Acres - 37
 Potential MBF - 843
 Quarter Quad - klnb4w
 VCU Number - 7530
 Photo Number - 1390085
 Alternative Pattern - 23450
 * Landing

LOGGING SYSTEMS Abbrev.

RS Running Skyline
 HE Helicopter
 HL High Lead
 SL Slack Line
 SH Shovel Yarding

Projection - Stateplane



Eagle Nest



Unit Data Card - Sea Level Draft EIS

Unit Number:	75	Planned Acres:	59.5	Silvicultural System:	ITM	In Alternative:	2
LUD:	TP	Harvest Acres:	59.5	Quad:	ktnb4nw	Photo:	1390-104
Primary Watershed Code:	E76A	Primary WAA Number:	405	Management Area:	K35	VCU Number:	7530
Number of Settings:	8	Logging System:	HE	Total Estimated Harvest Volume (MBF):		861.2	

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	59.5	Cedar:	0.0	Mixed Hem/Spr:	0.0	Nonforested:	0.0			
Site Productivity Classes	Low:	0.0	Medium:	0.0	High:	59.5	Primary Aspect:				SSE		
Volume Strata	Low:	0.0	Medium:	10.0	High:	49.5	Noncommercial:	0.0	Primary ROS Code:			RM	
Visuals	Seen:	59.5	Not Seen:	0.0	Primary ROS Code:								RM
VQOs	PR:	0.0	MM:	59.5	M:	0.0	P:	0.0	R:	0.0			
VAC Rating	Low:	48.4	Intermediate:	10.5	High:	0.6	Roadless:				59.5		
Mass Movement Index	Low:	0.0	Medium:	0.4	High:	59.1	Very High:	0.0	Slopes Greater Than 72%:	34.0			
Wetland Type	Alpine Shrubland/Muskeg:		0.1	Subalpine Forested Wetland:		10.0							
TLMP High Value Marten Habitat	48.5												

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS: No Concerns

FISH/WATERSHED:

No fisheries concerns

GEOLOGY:

High potential for landslides in this unit. See Soils for mitigation measures.

LANDS:

No concerns.

RECREATION/VISUALS: No concerns.

SILVICULTURE:

Helicopter harvest 59.5 acres using a diameter limit prescription designed to meet the Marten standards (see wildlife). CT 10/21/97

SOILS:

This unit has a high potential for landslides (BMP 13.5). About 10 acres of subalpine forested wetland is located in the southwest corner of this unit (BMP 12.5). Selective tree harvest prescription will help to minimize ground disturbance and maintain wetland functions (BMP 12.5) and slope stability (BMP 13.5). Helicopter logging is a low impact logging system which minimizes ground disturbance and provides full log suspension when yarding (BMP 13.9). No road construction is planned in this unit (BMP 14.1) due to the high landslide potential (BMP 13.5). 34 acres of this unit is made up of slopes greater than 72%. An on-site analysis of these slopes by the IDT soil scientist determined that the risk of potential impacts of accelerated erosion on downslope and downstream fish habitat, other beneficial uses of water and other resources was minimal and are included within the timber harvest unit (BMP 13.2).

TIMBER:

Planned logging systems design for this unit is Helicopter.

WILDLIFE:

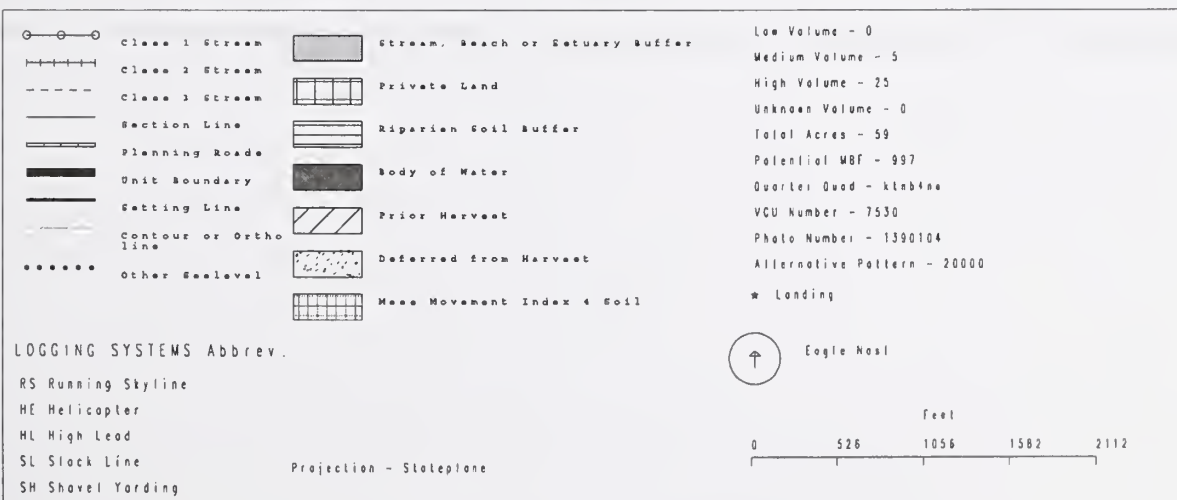
Marten guidelines apply: maintain 10-20% of canopy, average 4 large trees/acre (20-30"+), average 3 snags per acre, average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 75

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, J:\files\rel\library\gis\sealevel\draftcard\draftcard.mxd



Unit Data Card - Sea Level Draft EIS

Unit Number:	76	Planned Acres:	36.5	Silvicultural Systems:	ITM, DEF	In Alternative:	2
LUD:	TP	Harvest Acres:	29.9	Quad:	ktnb4nw	Photo:	1390-104
Primary Watershed Code:	E76A	Primary WAA Number:	405	Management Area:	K35	VCU Number:	7530
Number of Settings:	6	Logging System:	HE	Total Estimated Harvest Volume (MBF):		445.1	

PHYSICAL DESCRIPTION

Forest Type	Spruce:	00.0	Hemlock:	12.8	Cedar:	00.0	Mixed Hem/Spr:	23.7	Nonforested:	00.0	
Site Productivity Classes	Low:	0.0	Medium:	36.5	High:	0.0	Primary Aspect:				W
Volume Strata	Low:	0.0	Medium:	0.0	High:	36.5	Noncommercial:	0.0	Primary ROS Code:		RM
Visuals	Seen:	13.1	Not Seen:	16.8							
VQOs	PR:	0.0	MM:	29.9	M:	0.0	P:	0.0	R:	0.0	
VAC Rating	Low:	0.0	Intermediate:	15.5	High:	21.0	Roadless:				31.6
Mass Movement Index	Low:	0.0	Medium:	0.0	High:	36.5	Very High:	0.0	Slopes Greater Than 72%:	12.0	
Wetland Type			None								
TLMP High Value Marten Habitat		36.5									

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS: No Concerns

FISH/WATERSHED:

Class II (direct) MC2 west: Greater of 100 foot or RMA (top of sideslope) buffer required.

Class III HC6 south: Sideslope S&G buffer (top of V-notch) to form unit boundary.

GEOLOGY:

High landslide potential. See Soils for mitigation measures.

LANDS:

No concerns.

RECREATION/VISUALS: No concerns.

SILVICULTURE:

Helicopter harvest 29.5 acres using a diameter limit prescription. Defer harvest on 7 acres to meet Marten standards (see wildlife). CT 10/21/97

SOILS:

Unit consists of high landslide potential soils (BMP 13.5). 6.6 acres of the high landslide potential soils have been placed in deferral areas (BMP 13.1). Helicopter yarding is a low impact logging system which minimizes ground disturbance and provides full log suspension when yarding (BMP 13.9). Individual tree selection harvest will also help to minimize ground disturbance (BMP 13.2). No roads are planned for construction due to high landslide potential (BMP 14.7). About 12 acres of this unit consists of slopes greater than 72%. An on-site analysis of these slopes by the IDT soil scientist determined that the risk of potential impacts of accelerated erosion on downslope and downstream fish habitat, other beneficial uses of water and other resources was minimal and these slopes are included within the timber harvest unit (BMP 13.2).

TIMBER:

Planned logging systems design for this unit is Helicopter.

WILDLIFE:

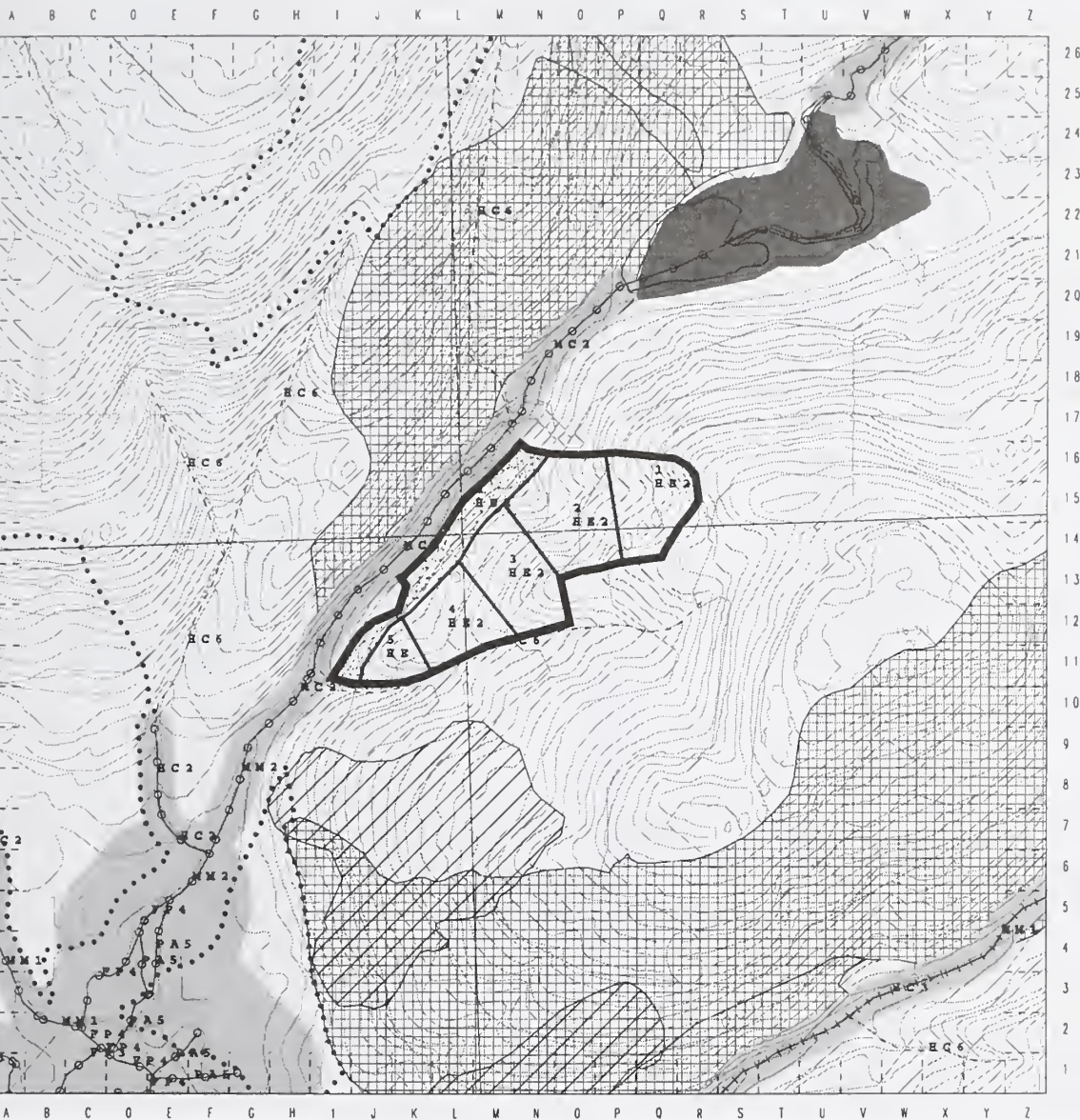
Marten guidelines apply: maintain 10-20% of canopy, average 4 large trees/acre (20-30"+), average 3 snags per acre, average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 76

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, /h:/files/cut/library/gis/sealevel/draftcard/draftcard.mxd



Note: Compiled from various digital geographic data. This map may not meet National Map Accuracy Standards



Unit Data Card - Sea Level Draft EIS

Unit Number:	80	Planned Acres:	81.6	Silvicultural Systems:	CC, DEF	In Alternatives:	2, 3, 4
LUD:	ML	Harvest Acres:	51.8	Management Area:	K35	VCU Number:	7460
Primary Watershed Code:	D87A	Primary WAA Number:	405	Quad:	ktnc4sw	Photo:	1390-39
Number of Settings:	15	Logging System:	RS	Total Estimated Harvest Volume (MBF): 1,412.9			

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	44.5	Cedar:	0.0	Mixed Hem/Spr:	37.1	Nonforested:	0.0
Site Productivity Classes	Low:	5.8	Medium:	0.0	High:	75.8	Primary Aspect: WSW			
Volume Strata	Low:	5.8	Medium:	38.7	High:	37.1	Noncommercial:	0.0		
Visuals	Seen:	41.9	Not Seen:	19.9	Primary ROS Code: RM					
VQOs	PR:	41.9	MM:	9.9	M:	0.0	P:	0.0	R:	0.0
VAC Rating	Low:	66.2	Intermediate:	0.0	High:	15.3	Roadless: 0.0			
Mass Movement Index	Low:	5.8	Medium:	75.8	High:	0.0	Very High:	0.0	Slopes Greater Than 72%:	0.9
Wetland Type	Short Sedge Meadow:		1.6	Forested Wetland: 10.8						
TLMP High Value Marten Habitat	28.0									

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS:

No Concerns

FISH/WATERSHED:

Class I FP2, FP3 south: Greater of 130 foot or floodplain RMA buffer required.

Class I PA1 east: Greater of 100 foot or RMA buffer required.

Class I FP3 east: Greater of 130 foot or floodplain RMA buffer required.

Class III HC3 (2 each) east: Sideslope S&G buffer (top of V-notch), split yard or full suspension required.

GEOLOGY:

No concerns.

LANDS:

No concerns.

RECREATION/VISUALS:

Most of the bare ground and exposed slash will be screened from view by beach fringe old-growth; a noticeable opening in the natural canopy would be apparent, as proposed, this unit would meet the Partial Retention VQO.

SILVICULTURE:

Highly productive. Clearcut harvest 52 acres. Plant 3 acres with AYC the remainder of the stand should regenerate naturally. Harvest deferred on 30 acres to meet Marten standards (see wildlife). This unit has Sensitive Plant concerns specifically *Platanthera Chorisiana*, defer small area in Northwest corner to protect population, see resource report. CT 10/22/97

SOILS:

About 10 acres of forested wetland are located in the central part of this unit (BMP 12.5). A small area of forest wetland is located in the north end of the unit. Use a low impact logging system which minimizes ground disturbance and provides at least partial log suspension on these wetlands (BMP 13.9). Access roads have been located to avoid these wetland, to the extent possible (BMP 14.2). Use overlay road construction and minimize side ditching, where practicable on these wetlands, to minimize the effects upon groundwater flow (BMPs 12.5 and 14.3).

TIMBER:

Planned logging system design for this unit is Running Skyline. Confirm final road and landing locations.

WILDLIFE:

Unit is within 0.5 miles of a bald eagle nest. Follow Interagency Agreement. Blasting prohibited within 0.5 mile of nest March 1 through May 31. If nest is determined active, blasting prohibited within 0.5 mile of nest June 1 through August 31.

Maintain 1000 foot beach/estuary buffer.

Marten guidelines apply: maintain 10-20% of canopy, average 4 large trees/acre (20-30"+), average 3 snags per acre, average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

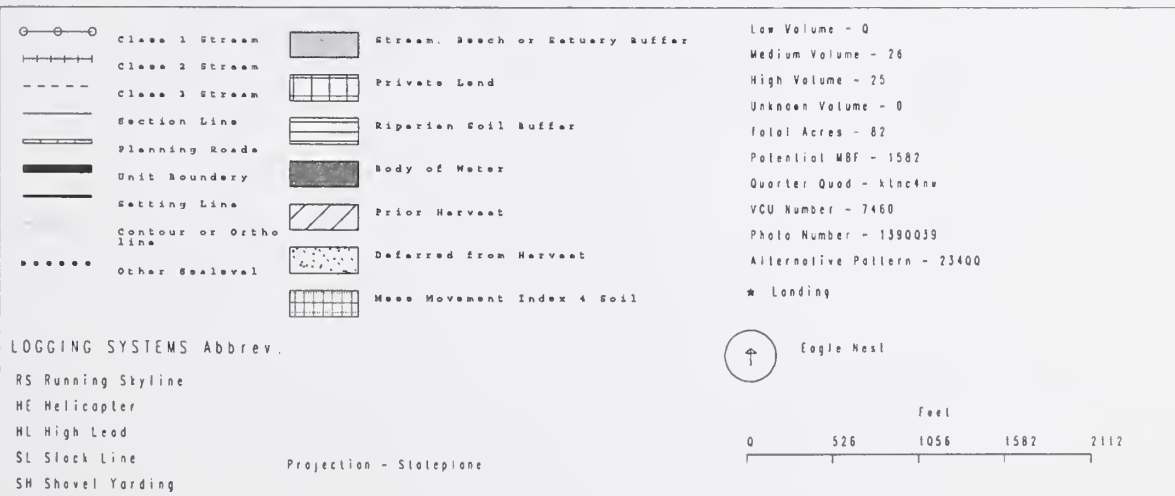
Sealevel Study Area Unit Schematic - Draft Unit 80

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, //s://files/cel/library/gis/sealevel/draftcard/draftcard.mxd



Note: Compiled from various digital geographic data. This map may not meet National Map Accuracy Standards



Unit Data Card - Sea Level Draft EIS

Unit Number:	81	Planned Acres:	27.0	Silvicultural Systems:	CC, DEF	In Alternatives:	2, 3, 4
LUD:	ML	Harvest Acres:	10.6	Management Area:	K35	VCU Number:	7460
Primary Watershed Code:	115A	Primary WAA Number:	405	Quad:	ktnc4sw	Photo:	1390-39
Number of Settings:	5	Logging Systems:	RS, SH	Total Estimated Harvest Volume (MBF):	262.3		

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	27.0	Cedar:	0.0	Mixed Hem/Spr:	0.0	Nonforested:	0.0	
Site Productivity Classes	Low:	1.8	Medium:	0.0	High:	25.2	Primary Aspect:				W
Volume Strata	Low:	1.8	Medium:	25.2	High:	0.0	Noncommercial:	0.0			
Visuals	Seen:	0.0	Not Seen:	10.6					Primary ROS Code:	RM	
VQOs	PR:	0.0	MM:	10.6	M:	0.0	P:	0.0	R:	0.0	
VAC Rating	Low:	0.3	Intermediate:	0.0	High:	26.7	Roadless:				0.0
Mass Movement Index	Low:	1.8	Medium:	24.8	High:	0.4	Very High:	0.0	Slopes Greater Than 72%:	0.0	
Wetland Type			Forested Wetland:	14.7							
TLMP High Value Marten Habitat	0.0										

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO 1/2/96 RAL

ENGINEERING/ROADS: No Concerns

FISH/WATERSHED:

Class I MC1 west, Greater of 100 foot or RMA (top of sideslope) buffer required.

Class II FP3 north: Greater of 130 foot or floodplain RMA buffer required.

GEOLOGY:

No concerns.

LANDS:

No concerns.

RECREATION/VISUALS: No concerns.

SILVICULTURE:

Highly productive. Clearcut harvest 11 acres. Stand should regenerate naturally. Harvest deferred on 16 acres for organic soils concerns. CT 10/22/97

SOILS:

The southern part of this unit consists mainly of about 14.7 acres of forested wetland (BMP 12.5). Most of these wetlands have been placed in deferral areas. Recommend that a low impact logging system, in this area shovel logging, be used to minimize the effects upon wetland functions (BMP 13.9). Roads have been located to minimize the amount of wetlands affected (BMPs 14.1 and 14.2). For those roads constructed on wetlands, use overlay road construction and minimize side-ditching, where practicable, to minimize the effects upon ground-water flow and alteration of wetness (BMPs 12.5 and 14.3).

TIMBER:

Planned logging system design for this unit is Shovel and Running Skyline. Confirm final road and landing locations.

WILDLIFE:

No wildlife mitigation anticipated for this unit.

Unit Data Card - Sea Level Draft EIS

Seal Level Study Area Unit Schematic - Draft Unit 81

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1987, //file:///c:/libray/gis/sealevel/draftcard/draftcard.dml



A B C D E F G H I J K L M N O P Q R S T U V W X Y Z



A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

Note: Compiled from various digital geographic data. This map may not meet National Map Accuracy Standards

	Class 1 Stream		Stream, Beach or Estuary Buffer
	Class 2 Stream		Private Land
	Class 3 Stream		Riparian Soil Buffer
	Section Line		Body of Water
	Planning Roads		Prior Harvest
	Unit Boundary		Deferred from Harvest
	Setting Line		Mass Movement Index 4 Soil
	Contour or Ortho line		
	Other Sealevel		

Low Volume - 0
Medium Volume - 10
High Volume - 0
Unknown Volume - 0
Total Acres - 27
Potential MBF - 276
Quarter Quad - kinctse
VCU Number - 7460
Photo Number - 1390039
Alternative Pattern - 23400
★ Landing

LOGGING SYSTEMS Abbrev.

RS Running Skyline
HE Helicopter
HL High Lead
SL Slock Line
SH Shovel Yarding

Projection - Stoleplane



Eagle Nest



Unit Data Card - Sea Level Draft EIS

Unit Number:	82	Planned Acres:	35.4	Silvicultural Systems:	CC, DEF	In Alternatives:	2, 3, 4
LUD:	ML	Harvest Acres:	27.0	Management Area:	K35	VCU Number:	7460
Primary Watershed Code:	115A	Primary WAA Number:	405	Quad:	ktnc4sw	Photo:	1390-88
Number of Settings:	6	Logging Systems:	RS, LS	Total Estimated Harvest Volume (MBF):	1,323.9		

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	0.0	Cedar:	0.0	Mixed Hem/Spr:	35.4	Nonforested:	0.0	
Site Productivity Classes	Low:	0.0	Medium:	0.0	High:	35.4	Primary Aspect: S				
Volume Strata	Low:	0.0	Medium:	0.0	High:	35.3	Noncommercial:	0.1			
Visuals	Seen:	23.0	Not Seen:	4.0					Primary ROS Code:	RM	
VQOs	PR:	0.0	MM:	4.0	M:	23.0	P:	0.0	R:	0.0	
VAC Rating	Low:	0.0	Intermediate:	34.3	High:	1.1	Roadless:				0.0
Mass Movement Index	Low:	0.0	Medium:	14.5	High:	20.9	Very High:	0.0	Slopes Greater Than 72%:	1.5	
Wetland Type											
TLMP High Value Marten Habitat	35.4										

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS: No Concerns

FISH/WATERSHED:

Class II (direct) HC2 west to southwest: Great of 100 foot or RMA (top of V-notch) buffer required.

Class III HC6 northwest to south: Sideslope S&G buffer (top of V-notch), split yard or full suspension required, 100 foot bufer applied.

GEOLOGY:

Unit is an area of low vulnerability karst. No specific karst features have been located within this harvest unit and the potential to find significant features is low. Resource damage potential associated with land management activities in the area is not likely to be any greater than those posed by similar activities on non-carbonate rock.

LANDS:

No concerns.

RECREATION/VISUALS: No concerns.

SILVICULTURE:

Highly productive. Clearcut harvest 27 acres. Stand should regenerate naturally. Harvest deferred on 8 acres to meet Marten standards (see wildlife). CT 10/22/97

SOILS:

Unit includes high landslide potential (MMI=3) soils (BMP 13.5). 5.3 acres of the MMI=3 soils have been deferred from timber harvest (BMP 13.1). Use a low impact logging system which minimizes ground disturbance and provides at least partial log suspension when yarding (BMP 13.9). Roads may require full-bench design to maintain slope stability (BMP 14.7). About 1.5 acres of this unit consists of slopes greater than 72%. An on-site analysis of these slopes by the IDT soil scientist determined that the risk of potential impacts of accelerated erosion on downslope and downstream fish habitat, other beneficial uses of water and other resources was minimal and these slopes are included within the timber harvest unit (BMP 13.2).

TIMBER:

Planned logging systems design for this unit is Running Skyline and Live Skyline. Confirm final road and landing locations.

WILDLIFE:

Marten guidelines apply: maintain 10-20% of canopy, average 4 large trees/acre (20-30"+), average 3 snags per acre, average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

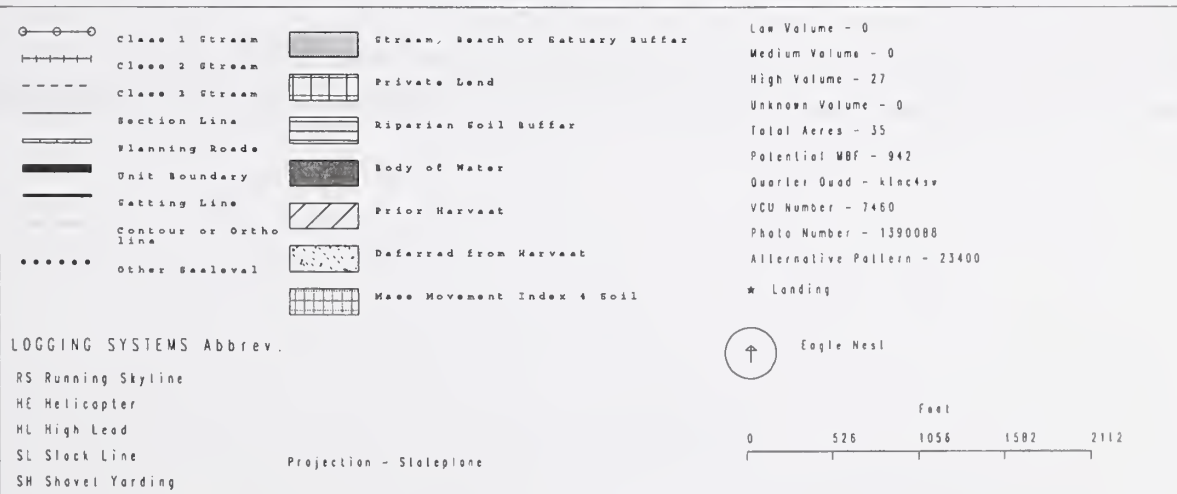
Sealevel Study Area Unit Schematic - Draft Unit 82

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, //siles/ref/library/gis/sealevel/draftcard.dml



Note: Compiled from various digital geographic data. This map may not meet National Map Accuracy Standards



Unit Data Card - Sea Level Draft EIS

Unit Number:	83	Planned Acres:	33.3	Silvicultural Systems:	CC, DEF	In Alternative:	2
LUD:	TP	Harvest Acres:	25.7	Quad:	ktnb4nw	Photo:	1390-89
Primary Watershed Code:	114A	Primary WAA Number:	405	Management Area:	K35	VCU Number:	7460
Number of Settings:	3	Logging System:	SL	Total Estimated Harvest Volume (MBF):		1,262.6	

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	33.3	Cedar:	0.0	Mixed Hem/Spr:	0.0	Nonforested:	0.0	
Site Productivity Classes	Low:	0.0	Medium:	33.3	High:	0.0	Primary Aspect:			NW	
Volume Strata	Low:	0.0	Medium:	0.0	High:	33.3	Noncommercial	0.0			
Visuals	Seen:	13.5	Not Seen:	12.2				Primary ROS Code:			RM
VQOs	PR:	0.0	MM:	12.2	M:	13.5	P:	0.0	R:	0.0	
VAC Rating	Low:	0.0	Intermediate:	23.6	High:	9.6	Roadless:			0.0	
Mass Movement Index	Low:	0.0	Medium:	0.0	High:	33.3	Very High:	0.0	Slopes Greater Than 72%:	3.0	
Wetland Type			None								
TLMP High Value Marten Habitat		33.3									

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS: No Concerns

FISH/WATERSHED:

Class II (direct) MM2 north: Greater of 120 foot or RMA buffer required.
Class II (direct) HC2 west: Greater of 100 foot or RMA (top of V-notch) buffer required.
Class III HC6 southwest: Sideslope S&G buffer to form unit boundary.

GEOLOGY:

Unit contains high landslide potential areas. See Soils for mitigation measures. West side of unit contains karst features. Recommend that the unit boundary be located 200 feet to the east to avoid these features.

LANDS:

No concerns.

RECREATION/VISUALS: No concerns.

SILVICULTURE:

Moderately productive. Clearcut harvest 26 acres. Stand should regenerate naturally. Harvest deferred on 7 acres to meet Marten standards (see wildlife). CT 10/22/97

SOILS:

Unit contains high landslide potential soils (MMI=3) (BMP 13.5). Use a low impact logging system that minimizes ground disturbance and provides at least partial log suspension when yarding (BMP 13.9). Access roads have been located to avoid high landslide potential areas in this unit (BMPs 14.2 and 14.7). 7.6 acres of the MMI=3 soils have been placed in deferral areas (BMP 13.1). This unit contains 3.0 acres of slopes greater than 72%. An on-site analysis of these slopes by the IDT soil scientist determined that the risk of potential impacts of accelerated erosion on downslope and downstream fish habitat, other beneficial uses of water and other resources was minimal and these slopes are included within the timber harvest unit (BMP 13.2).

TIMBER:

Planned logging systems design for this unit is Slackline Yarding. A profile/logging systems analysis will establish unit boundary on the eastern portion of the Slackline setting where a slope break was identified. Confirm final road and landing locations.

WILDLIFE:

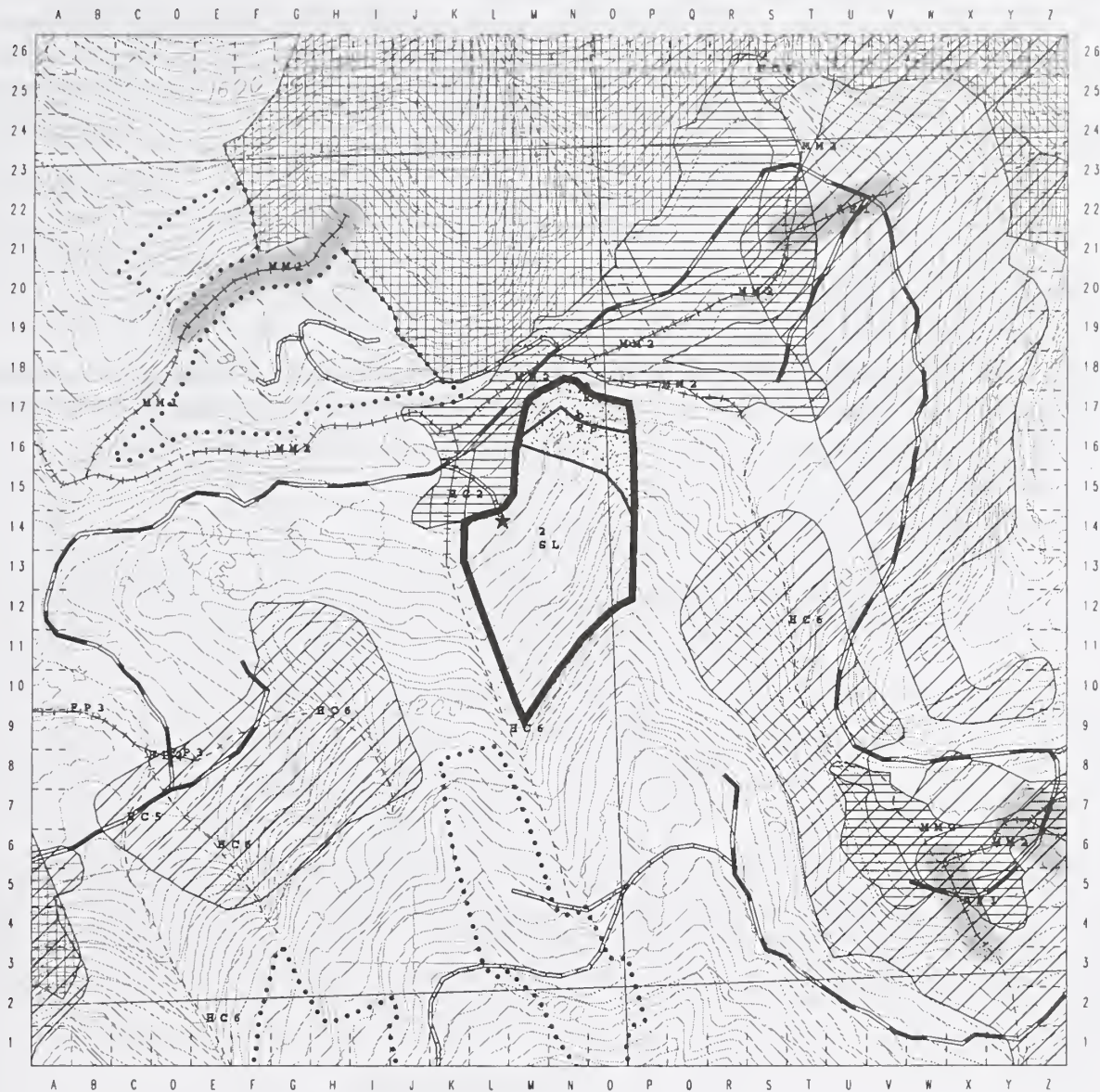
Marten guidelines apply: maintain 10-20% of canopy, average 4 large trees/acre (20-30"+), average 3 snags per acre, average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 83

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, //files/rsl/library/gis/sealevel/draftcard/draftcard.mxd



Note: Compiled from various digital geographic data. This map may not meet National Map Accuracy Standards

	Class 1 Stream		Stream, Beach or Estuary Buffer
	Class 2 Stream		Private Land
	Class 3 Stream		Riparian Soil Buffer
	Section Line		Body of Water
	Planning Road		Prior Harvest
	Unit Boundary		Deferred from Harvest
	Felling Line		Mass Movement Index 4 Soil
	Contour or Ortho line		
	Other Sealevel		

Low Volume - 0
 Medium Volume - 0
 High Volume - 26
 Unknown Volume - 0
 Total Acres - 33
 Potential WBF - 838
 Overler Quad - klectse
 VCU Number - 7460
 Photo Number - 1390089
 Alternative Pattern - 20000
 * Landing

LOGGING SYSTEMS Abbrev.

RS Running Skyline
 HE Helicopter
 HL High Lead
 SL Slack Line
 SH Shovel Yarding

Projection - Stoleplane



Eagle Nest



Unit Data Card - Sea Level Draft EIS

Unit Number:	84	Planned Acres:	28.1	Silvicultural Systems:	CC, DEF	In Alternative:	none
LUD:	ML	Harvest Acres:	10.8	Quad:	ktnc4sw	Photo:	1390-89
Primary Watershed Code:	114A	Primary WAA Number:	405	Management Area:	K35	VCU Number:	7460
Number of Settings:	4	Logging System:	RS	Total Estimated Harvest Volume (MBF):		525.1	

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	28.1	Cedar:	0.0	Mixed Hem/Spr:	0.0	Nonforested:	0.0	
Site Productivity Classes	Low:	0.0	Medium:	27.1	High:	1.0	Primary Aspect:				N
Volume Strata	Low:	0.0	Medium:	3.7	High:	24.4	Noncommercial:	0.0	Primary ROS Code:		SPNM
Visuals	Seen:	10.8	Not Seen:	0.0							
VQOs	PR:	0.0	MM:	0.0	M:	10.8	P:	0.0	R:	0.0	
VAC Rating	Low:	0.0	Intermediate:	28.1	High:	0.0	Roadless:				0.0
Mass Movement Index	Low:	0.0	Medium:	2.1	High:	26.0	Very High:	0.0	Slopes Greater Than 72%:		0.7
Wetland Type	Alpine Shrubland/Muskeg:			0.4	Subalpine Forested Wetland:			5.4			
TLMP High Value Marten Habitat		21.0									

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO 1/2/96 RAL

ENGINEERING/ROADS: No Concerns

FISH/WATERSHED: Class III HC6 east: Sideslope S&G buffer to form unit boundary.

GEOLOGY:

The east side of this unit contains karst landscape features. These karst features will be deferred from harvest areas in the unit design and layout. High landslide potential areas. See Soils for mitigation measures.

LANDS:

No concerns.

RECREATION/VISUALS: No concerns.

SILVICULTURE:

Highly productive. Clearcut harvest 13 acres. Stand should regenerate naturally. Harvest deferred on 15.1 acres to meet Marten standards (see wildlife). CT 10/22/97

SOILS:

The south end of this unit consists of high landslide potential (MMI=3) soils (BMP 13.5). 15.6 acres of these MMI=3 soils have been placed in deferral areas (BMP 13.1). The western side of this unit consists of about 5 acres of subalpine forested wetland (BMP 12.5). Use a low impact logging system that minimizes ground disturbance and provides at least partial log suspension when yarding on wetlands and high landslide potential soils (BMP 13.9). Access roads have been located to avoid these wetland and high landslide potential areas, to the extent possible (BMP 14.2). Where road construction takes place on high landslide potential areas, full-bench design may be required (BMP 14.7). Minimize the amount of fill slopes on high landslide potential sites (BMP 14.7). Limit blasting for road construction and rock pit development when the soil is saturated (BMP 14.6). On wetlands, use overlay road construction and minimize side ditching, where practicable, to minimize the effects upon groundwater flow (BMPs 12.5 and 14.3). Avoid the use of these wetlands for the disposal of waste material or other fill (BMP 14.19).

TIMBER:

Planned logging system design for this unit is Running Skyline. Confirm final road and landing locations.

WILDLIFE:

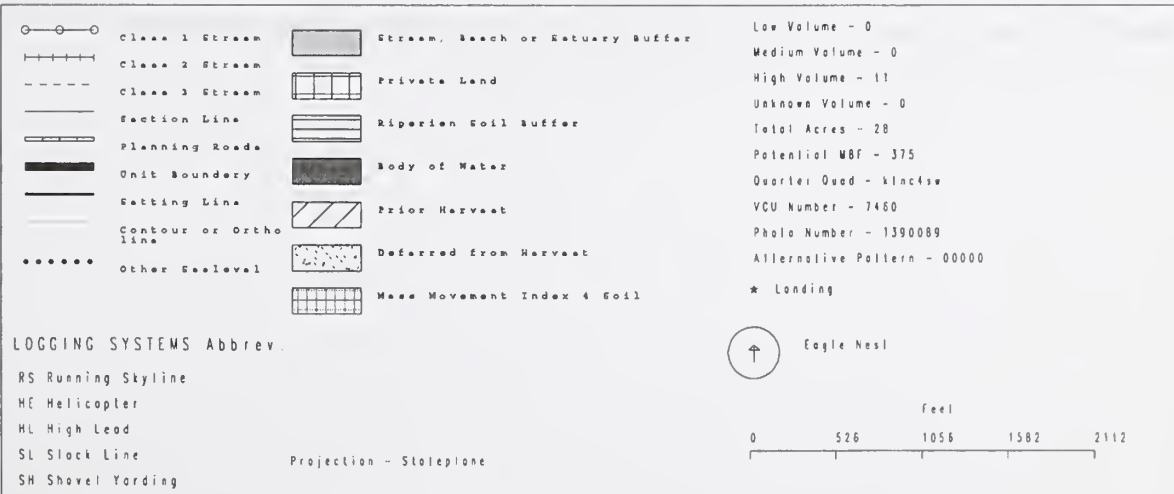
Marten guidelines apply: maintain 10-20% of canopy, average 4 large trees/acre (20-30"+), average 3 snags per acre, average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 84

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, //sfiles/ref/library/gis/sealevel/draftcard/draftcard.mxd



Unit Data Card - Sea Level Draft EIS

Unit Number:	85	Planned Acres:	23.9	Silvicultural Systems:	CC, DEF	In Alternative:	none
LUD:	ML	Harvest Acres:	20.0	Quad:	ktnc4sw	Photo:	1390-89
Primary Watershed Code:	114A	Primary WAA Number:	405	Management Area:	K35	VCU Number:	7460
Number of Settings:	4	Logging System:	LS	Total Estimated Harvest Volume (MBF):		575.4	

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	23.9	Cedar:	0.0	Mixed Hem/Spr:	0.0	Nonforested:	0.0
Site Productivity Classes	Low:	0.0	Medium:	23.9	High:	0.0	Primary Aspect:			W
Volume Strata	Low:	0.0	Medium:	8.7	High:	15.2	Noncommercial	0.0		
Visuals	Seen:	20.0	Not Seen:	0.0				Primary ROS Code: SPNM		
VQOs	PR:	0.0	MM:	0.0	M:	20.0	P:	0.0	R:	0.0
VAC Rating	Low:	0.0	Intermediate:	23.9	High:	0.0	Roadless:			0.0
Mass Movement Index	Low:	0.0	Medium:	0.0	High:	23.9	Very High:	0.0	Slopes Greater Than 72%:	0.6
Wetland Type	Subalpine Forested Wetland:			16.7						
TLMP High Value Marten Habitat	14									

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO 1/2/96 RAL

ENGINEERING/ROADS: No Concerns

FISH/WATERSHED:

Class III HC6 west: Sideslope S&G buffer to form unit boundary.
Class III HC6 east: Sideslope S&G buffer to form unit boundary.

GEOLOGY:

Unit consists of high landslide potential (MMI=3) soils. See Soils for mitigation measures.

LANDS:

No concerns.

RECREATION/VISUALS: No concerns.

SILVICULTURE:

Moderately productive. Clearcut harvest 20 acres. Stand should regenerate naturally. Harvest deferred on 4 acres to meet Marten standards (see wildlife). CT 10/22/97

SOILS:

This unit consists of high landslide potential (MMI=3) soils (BMP 13.5). About four acres of the MMI=3 soils have been placed in deferral areas (BMP 13.1). Most of the unit also consists of subalpine forested wetland (BMP 12.5). Use a low impact logging system that minimizes ground disturbance and provides at least partial log suspension when yarding (BMP 13.9). Road construction on high landslide potential slopes may require full-bench design (BMP 14.7). Minimize the amount of fill slopes (BMP 14.7) and avoid the use of wetlands for the disposal of waste material and other fill (BMP 14.19). Limit blasting for road construction and rock pit development when the soil is saturated (BMP 14.6).

TIMBER:

Planned logging systems design for this unit is Live Skyline. Confirm final road and landing locations.

WILDLIFE:

Marten guidelines apply: maintain 10-20% of canopy, average 4 large trees/acre (20-30"+), average 3 snags per acre, average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 85

Mapscale 1:12000 (5 inch to Mile)

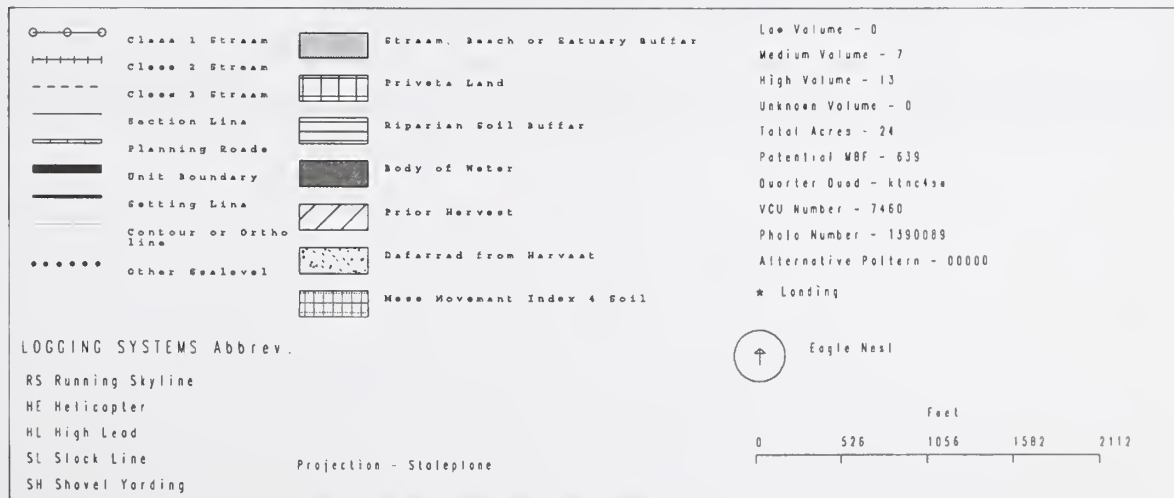
Created 11-17-1997, /s:/files/rat/library/gis/sealevel85/draftcard.dml



A B C D E F G H I J K L M N O P Q R S T U V W X Y Z



Note: Compiled from various digital geographic data. This map may not meet National Map Accuracy Standards



Unit Data Card - Sea Level Draft EIS

Unit Number:	86	Planned Acres:	25.0	Silvicultural Systems:	CC, DEF	In Alternative:	2
LUD:	ML	Harvest Acres:	19.3	Quad:	ktnc4sw	Photo:	1390-88
Primary Watershed Code:	D87A	Primary WAA Number:	405	Management Area:	K35	VCU Number:	7460
Number of Settings:	4	Logging Systems:	LS, SH	Total Estimated Harvest Volume (MBF):		579.4	

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	25.0	Cedar:	0.0	Mixed Hem/Spr:	0.0	Nonforested:	0.0
Site Productivity Classes	Low:	0.0	Medium:	3.4	High:	21.6	Primary Aspect:			S
Volume Strata	Low:	0.0	Medium:	0.4	High:	24.7	Noncommercial:	0.0		
Visuals	Seen:	18.0	Not Seen:	1.3				Primary ROS Code:		RM
VQOs	PR:	0.0	MM:	1.3	M:	18.0	P:	0.0	R:	0.0
VAC Rating	Low:	0.4	Intermediate:	24.6	High:	0.0	Roadless:			0.0
Mass Movement Index	Low:	0.0	Medium:	0.0	High:	25.0	Very High:	0.0	Slopes Greater Than 72%:	1.9
Wetland Type	Short Sedge Meadow:		1.2	Subalpine Forested Wetland:		5.4				
TLMP High Value Marten Habitat	7.0									

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS:

No Concerns

FISH/WATERSHED:

Class III HC6 northwest: Sideslope S&G buffer (top of V-notch) to form unit boundary.

GEOLOGY:

High landslide potential in the southern part of the unit. See Soils for mitigation measures.

LANDS:

No concerns.

RECREATION/VISUALS:

No concerns.

SILVICULTURE:

Highly productive. Clearcut harvest 19 acres. Plant 5 acres with AYC and SS the remainder of the stand should regenerate naturally. Harvest deferred on 6 acres to meet Marten standards (see wildlife). CT 10/22/97

SOILS:

The southern part of this unit consists of high landslide potential (MMI=3) soils (BMP 13.5). 5.7 acres of these MMI=3 soils have been placed in deferral areas (BMP 13.1). The eastern edge of the unit includes about 5 acres of subalpine forested wetland (BMP 12.5). A small area of short sedge meadow wetland is included within the unit boundary (BMP 12.5). Use a low impact logging system on high landslide potential and wetland soils which minimizes ground disturbance and provides at least partial log suspension when yarding (BMP 13.9). The access road has been located to avoid high landslide potential slopes and wetlands to the extent possible (BMP 14.2). Where the road does cross an area of wetlands, use an overlay road with minimal side ditching, where practicable, to minimize the effects upon groundwater flow (BMPs 12.5 and 14.3). The short sedge meadow has been included in a timber harvest deferral area (BMPs 12.5 and 13.2). About 2 acres of this unit consists of slopes greater than 72%. An on-site analysis of these slopes by the IDT soil scientist determined that the risk of potential impacts of accelerated erosion on downslope and downstream fish habitat, other beneficial uses of water and other resources was minimal and these slopes are included within the timber harvest unit (BMP 13.2).

TIMBER:

Planned logging systems design for this unit is Shovel and Live Skyline. Confirm final road and landing locations.

WILDLIFE:

Marten guidelines apply: maintain 10-20% of canopy, average 4 large trees/acre (20-30"+), average 3 snags per acre, average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 86

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, /tufiles/rul/library/gis/sealevel6/draftcard/draftcard.mxd



Note: Compiled from various digital geographic data. This map may not meet National Map Accuracy Standards



Unit Data Card - Sea Level Draft EIS

Unit Number:	87	Planned Acres:	28.0	Silvicultural Systems:	CC, DEF	In Alternative:	2
LUD:	ML	Harvest Acres:	23.0	Quad:	ktnc4sw	Photo:	1390-88
Primary Watershed Code:	D87A 114A	Primary WAA Number:	405	Management Area:	K35	VCU Number:	7460
Number of Settings:	5	Logging System:	LS	Total Estimated Harvest Volume (MBF):	642.7		

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	27.0	Cedar:	0.0	Mixed Hem/Spr:	1.0	Nonforested:	00.0	
Site Productivity Classes	Low:	0.0	Medium:	0.0	High:	28.0	Primary Aspect:			S	
Volume Strata	Low:	0.0	Medium:	9.0	High:	19.0	Noncommercial:	0.0	Primary ROS Code:		RM
Visuals	Seen:	23.0	Not Seen:	0.0	R:						0.0
VQOs	PR:	0.0	MM:	0.0	M:	23.0	P:	0.0	Roadless:		0.0
VAC Rating	Low:	7.7	Intermediate:	20.3	High:	0.0	Slopes Greater Than 72%:			4.0	
Mass Movement Index	Low:	0.0	Medium:	0.0	High:	28.0	Very High:	0.0	Slopes Greater Than 72%:		4.0
Wetland Type	Subalpine Forested Wetland: 1.5										
TLMP High Value Marten Habitat	19.0										

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO 2/21//95 rpt 1995-05-05 add 1, 11/3/95 SHPO 1/2/96 RAL

ENGINEERING/ROADS: No Concerns

FISH/WATERSHED:

Class IV HC5 center: Split yard or partial suspension.

Class III HC6 east: Sideslope S&G buffer (top of V-notch) to form unit boundary.

GEOLOGY:

Unit is located in a low vulnerability karst area. No specific karst features have been identified in this unit, but there is a potential for their occurrence. Resource damage potential associated with land management activities in these areas are greater than those on low or moderate vulnerability karst lands. If significant karst resources are identified during unit recon or layout, appropriate mitigation measures will be applied. The southern part of the unit includes high landslide potential areas. See Soils for mitigation measures.

LANDS:

No concerns.

RECREATION/VISUALS: No concerns.

SILVICULTURE:

Highly productive. Clearcut harvest 23 acres. Plant 5 acres of AYC and SS the remainder of the stand should regenerate naturally. Harvest deferred on 5 acres to meet Marten standards (see wildlife). CT 10/22/97

SOILS:

The southern part of this unit includes high landslide potential (MMI=3) soils (BMP 13.5). About five acres of the MMI=3 soils have been placed in deferral areas (BMP 13.1). A small area (about 1.5 acres) of subalpine forested wetland is located in the north-central part of this unit (BMP 12.5). Use a low impact logging system on these sites which minimizes ground disturbance and provides at least partial log suspension when yarding (BMP 13.9). The access road has been located to avoid the high landslide potential and wetland areas (BMP 14.2). 4.0 acres of this unit consists of slopes greater than 72%. An on-site analysis of these slopes by the IDT soil scientist determined that the risk of potential impacts of accelerated erosion on downslope and downstream fish habitat, other beneficial uses of water and other resources was minimal and these slopes are included within the timber harvest unit (BMP 13.2).

TIMBER:

Planned logging systems design for this unit is Live Skyline. Confirm final road and landing locations.

WILDLIFE:

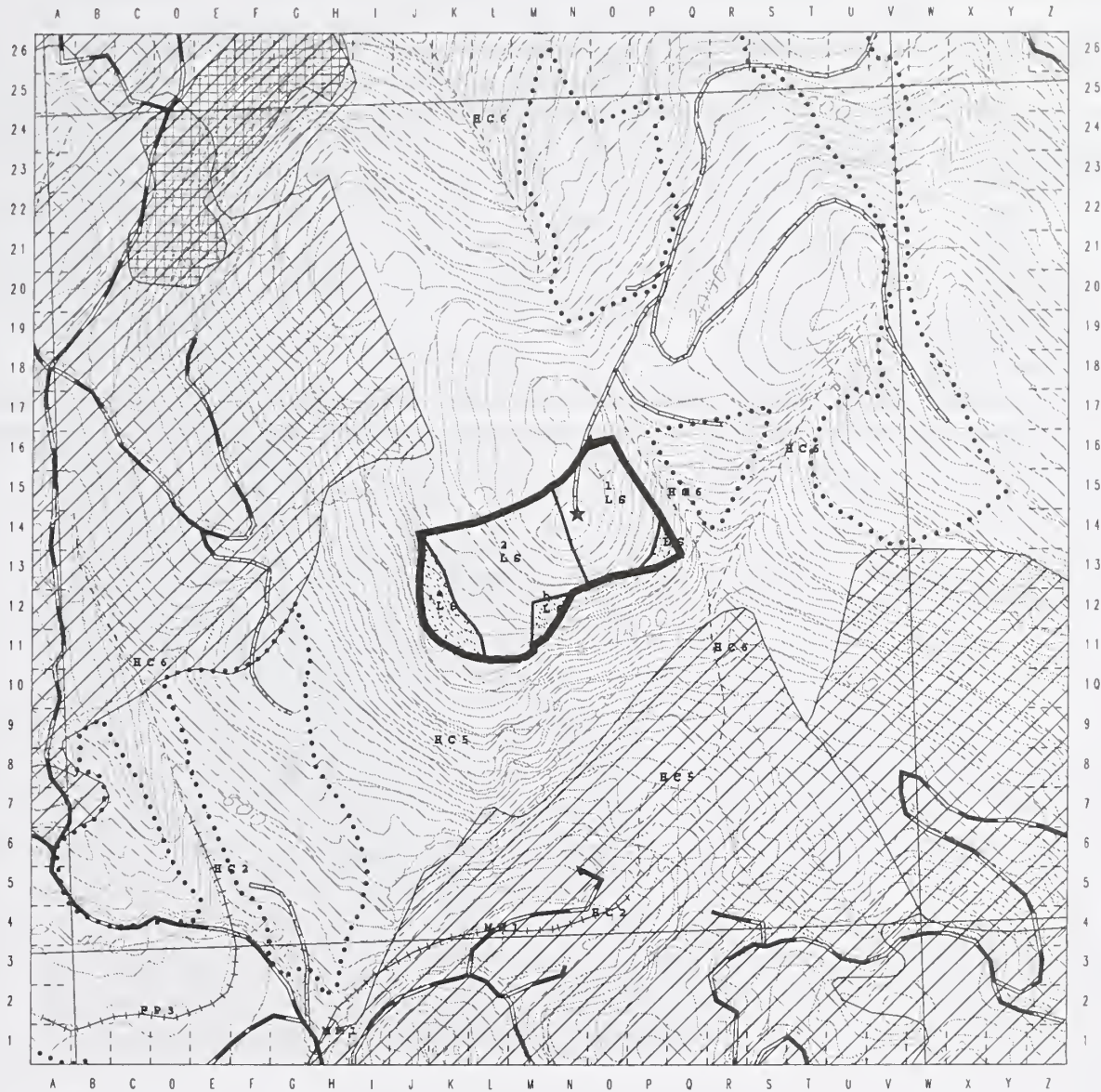
Marten guidelines apply: maintain 10-20% of canopy, average 4 large trees/acre (20-30"+), average 3 snags per acre, average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

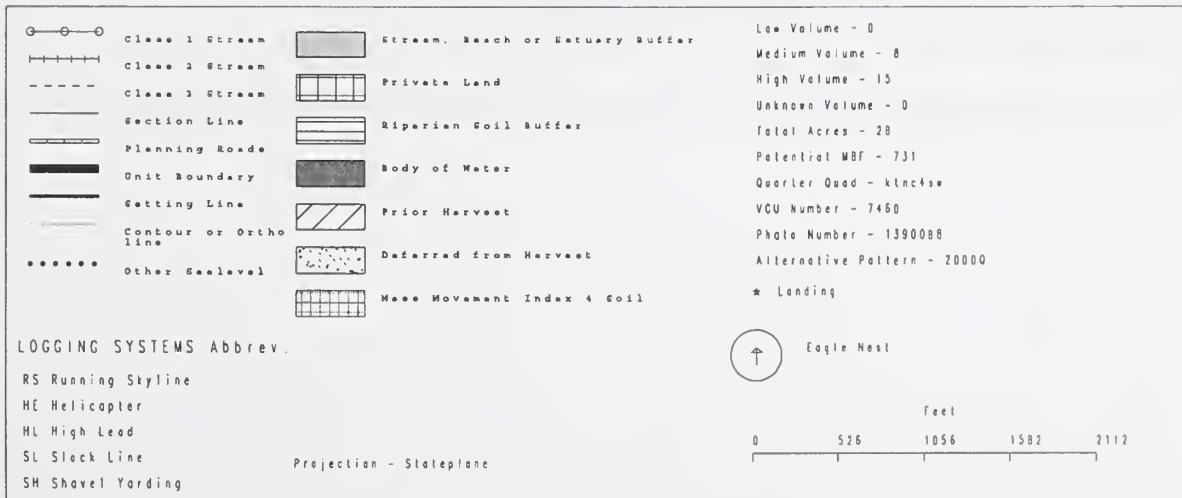
Sealevel Study Area Unit Schematic - Draft Unit 87

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, /s:/files/rel/library/gis/sealevel/draftcard/draftcard.mxd



Note: Compiled from various digital geographic data. This map may not meet National Map Accuracy Standards



Unit Data Card - Sea Level Draft EIS

Unit Number:	88	Planned Acres:	27.4	Silvicultural Systems:	CC, DEF	In Alternative:	5
LUD:	ML	Harvest Acres:	13.1	Quad:	ktnc4sw	Photo:	1390-36
Primary Watershed Code:	113A 114A	Primary WAA Number:	405	Management Area:	K35	VCU Number:	7460
Number of Settings:	7	Logging Systems:	RS, SH	Total Estimated Harvest Volume (MBF):	391.2		

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	27.2	Cedar:	0.0	Mixed Hem/Spr:	0.2	Nonforested:	0.0
Site Productivity Classes	Low:	0.0	Medium:	13.3	High:	14.1	Primary Aspect:			
Volume Strata	Low:	0.0	Medium:	12.1	High:	15.1	Noncommercial:	0.2		
Visuals	Scen:	7.0	Not Seen:	6.1	Primary ROS Code:					RM
VQOs	PR:	0.0	MM:	6.1	M:	7.0	P:	0.0	R:	0.0
VAC Rating	Low:	0.0	Intermediate:	0.0	High:	0.0	Roadless:			0.0
Mass Movement Index	Low:	12.1	Medium:	14.1	High:	1.2	Very High:	0.0	Slopes Greater Than 72%:	0.6
Wetland Type	Forested Wetland:		17.1							
TLMP High Value Marten Habitat	16.5									

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS: No Concerns

FISH/WATERSHED:

Class I MC2 south to southeast: Greater of 100 foot or RMA (top of sideslope) buffer required.

Class II (non-direct) HC3 west: Greater of 100 foot or RMA (top of V-notch) buffer required.

GEOLOGY:

No concerns.

LANDS:

No concerns.

RECREATION/VISUALS: No concerns.

SILVICULTURE:

Moderate productivity. Clearcut harvest 13 acres. Stand should regenerate naturally. Harvest deferred on 14 acres to meet Marten standards (see wildlife). CT 10/22/97

SOILS:

The western 2/3 of this unit (about 17 acres) consists of forested wetlands (BMP 12.5). Use a low impact yarding system on these wetlands which minimizes ground disturbance and provides at least partial log suspension when yarding (BMP 13.9). Use overlay road construction and minimize side ditching, where practicable, to minimize the effects upon ground-water flow and alteration of wetness (BMPs 12.5 and 14.3).

TIMBER:

Planned logging system design for this unit is Running Skyline. Confirm final road and landing locations.

WILDLIFE:

Unit is within 0.5 miles of a bald eagle nest. Follow Interagency Agreement. Blasting prohibited within 0.5 mile of nest March 1 through May 31. If nest is determined active, blasting prohibited within 0.5 mile of nest June 1 through August 31.

Maintain 1000 foot beach buffer.

Marten guidelines apply: maintain 10-20% of canopy, average 4 large trees/acre (20-30"+), average 3 snags per acre, average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

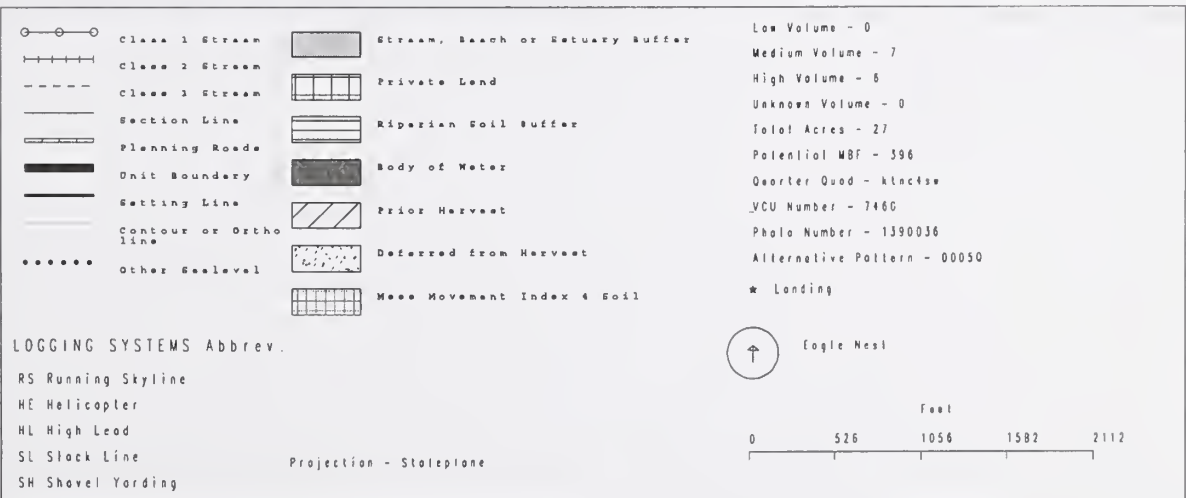
Sealevel Study Area Unit Schematic - Draft Unit 88

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, //ulifex/rel/library/gis/sealevel/draftcard/draftcard.mxd



Note: Compiled from various digital geographic data. This map may not meet National Map Accuracy Standards



Unit Data Card - Sea Level Draft EIS

Unit Number:	89	Planned Acres:	30.4	Silvicultural Systems:	CC, DEF	In Alternative:	5
LUD:	ML	Harvest Acres:	22.2	Quad:	ktnc4sw	Photo:	1390-36
Primary Watershed Code:	113A 114A	Primary WAA Number:	405	Management Area:	K35	VCU Number:	7460
Number of Settings:	9	Logging Systems:	RS, SH	Total Estimated Harvest Volume (MBF):		659.6	

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	30.3	Cedar:	0.0	Mixed Hem/Spr:	0.0	Nonforested:	0.1
Site Productivity Classes	Low:	0.0	Medium:	5.4	High:	25.0	Primary Aspect:			NNE
Volume Strata	Low:	3.0	Medium:	4.2	High:	23.2	Noncommercial:	0.0		
Visuals	Seen:	0.0	Not Seen:	22.2	Primary ROS Code:					RM
VQOs	PR:	0.0	MM:	22.2	M:	0.0	P:	0.0	R:	0.0
VAC Rating	Low:	0.0	Intermediate:	0.0	High:	30.4	Roadless:			0.0
Mass Movement Index	Low:	5.4	Medium:	25.0	High:	0.0	Very High:	0.0	Slopes Greater Than 72%:	0.2
Wetland Type	Short Sedge Meadow:		0.1		Forested Wetland:		13.8			
TLMP High Value Marten Habitat	23.9									

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2//96 RAL

ENGINEERING/ROADS: No Concerns

FISH/WATERSHED:

Class I MC2 south: Greater of 100 foot or RMA (top of sideslope) buffer required.

Class II (direct) MM2 southeast: Greater of 120 foot or RMA buffer required.

ClassI MC1 north: Greater of 100 foot or RMA (top of sideslope) buffer required.

GEOLOGY: No concerns..

LANDS: No concerns.

RECREATION/VISUALS: No concerns.

SILVICULTURE:

Highly productive. Clearcut harvest 22.4 acres. Stand should regenerate naturally. Harvest deferred on 8 acres to meet Marten standards (see wildlife). CT 10/22/97

SOILS:

Unit contains about 14 acres of forested wetlands (BMP 12.5). Use a low impact yarding system on these wetlands which minimizes ground disturbance and provides at least partial log suspension when yarding (BMP 13.9). Use overlay road construction and minimize side ditching, where practicable, to minimize the effects upon ground-water flow and alteration of wetness (BMPs 12.5 and 14.3).

TIMBER:

Planned logging system design for this unit is Shovel and Running Skyline. Confirm final road and landing locations.

WILDLIFE:

Marten guidelines apply: maintain 10-20% of canopy, average 4 large trees/acre (20-30"+), average 3 snags per acre, average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 89

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, /f:/h/ica/rel/library/gis/sealevel89/draftcard/draftcard.mxd



Note: Compiled from various digital geographic data. This map may not meet National Map Accuracy Standards

- | | | | |
|--|-----------------------|--|---------------------------------|
| | Class 1 Stream | | Stream, Beach or Estuary Buffer |
| | Class 2 Stream | | Private Land |
| | Class 3 Stream | | Riparian Soil Buffer |
| | Section Line | | Body of Water |
| | Planning Road | | Prior Harvest |
| | Unit Boundary | | Deferred from Harvest |
| | Settling Line | | Mass Movement Index 4 Soil |
| | Contour or Ortho line | | |
| | Other Sealevel | | |

Low Volume - 0
 Medium Volume - 2
 High Volume - 20
 Unknown Volume - 0
 Total Acres - 30
 Potential MBF - 756
 Quarter Quad - 414156
 VCU Number - 7460
 Photo Number - 1390036
 Alternative Pattern - 00050
 ★ Landing

LOGGING SYSTEMS Abbrev.

RS Running Skyline
 HE Helicopter
 HL High Lead
 SL Slack Line
 SH Shovel Yarding

Projection - Stateplane



Eagle Nest



Unit Data Card - Sea Level Draft EIS

Unit Number:	90	Planned Acres:	124.7	Silvicultural Systems:	CC, DEF	In Alternatives:	2, 5
LUD:	TP	Harvest Acres:	86.4	Quad:	ktnc4sw	Photo:	1390-36
Primary Watershed Code:	113A 114A	Primary WAA Number:	405	Management Area:	K35	VCU Number:	7460
Number of Settings:	16	Logging Systems:	RS, SL	Total Estimated Harvest Volume (MBF):	2,573.7		

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	120.9	Cedar:	0.0	Mixed Hem/Spr:	3.8	Nonforested:	0.0
Site Productivity Classes	Low:	0.0	Medium:	15.9	High:	108.7			Primary Aspect:	S
Volume Strata	Low:	0.0	Medium:	0.0	High:	124.7	Noncommercial:	0.0		
Visuals	Seen:	24.7	Not Seen:	61.7					Primary ROS Code:	RM
VQOs	PR:	0.0	MM:	86.4	M:	0.0	P:	0.0	R:	0.0
VAC Rating	Low:	0.0	Intermediate:	21.3	High:	103.4			Roadless:	0.0
Mass Movement Index	Low:	0.0	Medium:	108.7	High:	15.9	Very High:	0.0	Slopes Greater Than 72%:	3.1
Wetland Type			Forested Wetland:	26.8						
TLMP High Value Marten Habitat				127.0						

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95. rpt 1995-05-05 add 1, 11/3/95, SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS: No Concerns

FISH/WATERSHED:

Class II (non-direct) AFI west: Greater of 140 foot or RMA buffer required.
 Class IV HC5 (2 each) west: Split yard or partial suspension required
 Class IV HC1 center south: Split yard or partial suspension required.
 Class IV HC2 center southeast: Split yard or partial suspension required.
 Class III HC5 south: Sideslope S&G buffer (top of V-notch), split yard or full suspension required.
 Class IV HC3 east: Split yard or partial suspension required.
 Class III HC5 southeast: Sideslope S&G buffer (top of V-notch), split yard or full suspension required.
 Class III HC6 east: Sideslope S&G buffer to form unit boundary.
 Class II MM2 southeast: Greater of 120 foot or RMA buffer required to form unit boundary.

GEOLOGY:

This unit is located in a low karst vulnerability zone. A sink-hole was located just outside the southwest unit boundary during recon. The proposed action will not affect this sink-hole. No specific karst features have been identified in this unit. Karst resource damage potential is no more likely than in areas of non-carbonate bedrock.

LANDS:

No concerns.

RECREATION/VISUALS: No concerns.

SILVICULTURE:

Highly productive. Clearcut harvest 86 acres. Stand should regenerate naturally. Harvest deferred on 37 acres to meet Marten standards (see wildlife). CT 10/22/97

SOILS:

Almost 27 acres of forested wetlands are located in the southwest part of this unit (BMP 12.5). The north part of the unit is made up of high landslide potential soils (MMI=3) (BMP 13.5). 3.8 acres of the MMI=3 soils have been placed in deferral areas (BMP 13.1). Use a low impact yarding system which minimizes ground disturbance and provides at least partial log suspension when yarding (BMP 13.9). Roads have been located to avoid these wetland and high landslide potential areas (BMP 14.2). About 3 acres of this unit consist of slopes greater than 72%. An on-site analysis of these slopes by the IDT soil scientist determined that the risk of potential impacts of accelerated erosion on downslope and downstream fish habitat, other beneficial uses of water and other resources was minimal and these slopes are included within the timber harvest unit (BMP 13.2).

TIMBER:

Planned logging systems design for this unit is Running Skyline and Slackline. Confirm final road and landing locations.

WILDLIFE:

Marten guidelines apply: maintain 10-20% of canopy, average 4 large trees/acre (20-30"+), average 3 snags per acre, average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 90

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, /tallies/rel/library/gis/sealevel/draftcard/draftcard.mxd



Note: Compiled from various digital geographic data. This map may not meet National Map Accuracy Standards



Unit Data Card - Sea Level Draft EIS

Unit Number:	91	Planned Acres:	28.0	Silvicultural Systems:	CC, DEF	In Alternative:	none
LUD:	TP	Harvest Acres:	10.0	Quad:	kmc4sw	Photo:	1390-89
Primary Watershed Code:	I14A	Primary WAA Number:	405	Management Area:	K35	VCU Number:	7460
Number of Settings:	6	Logging System:	RS	Total Estimated Harvest Volume (MBF):	298.1		

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	15.2	Cedar:	0.0	Mixed Hem/Spr:	12.8	Nonforested:	0.0		
Site Productivity Classes	Low:	0.0	Medium:	4.1	High:	23.9	Primary Aspect:				S	
Volume Strata	Low:	0.0	Medium:	0.0	High:	28.0	Noncommercial:	0.0	Primary ROS Code:			SPNM
Visuals	Scen:	1.4	Not Seen:	8.6								
VQOs	PR:	0.0	MM:	10.0	M:	0.0	P:	0.0	R:	0.0		
VAC Rating	Low:	0.0	Intermediate:	10.0	High:	17.9	Roadless:					0.0
Mass Movement Index	Low:	0.0	Medium:	23.9	High:	4.1	Very High:	0.0	Slopes Greater Than 72%:			1.1
Wetland Type	Forested Wetland:		8.0	Scrub-Shrub Muskeg:		2.9						
TLMP High Value Marten Habitat	28.0											

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS: No Concerns

FISH/WATERSHED:

Class II (direct) MM1 north: Greater of 120 foot or RMA buffer required.

Class II (direct) MM2 south: Greater of 120 foot or RMA buffer required.

GEOLOGY:

No concerns.

LANDS:

No concerns.

RECREATION/VISUALS: No concerns.

SILVICULTURE:

Highly productive. Clearcut harvest 10 acres. Stand should regenerate naturally. Harvest deferred on 18 acres to meet Marten standards (see wildlife). CT 10/22/97

SOILS:

The eastern part of this unit contains 8 acres of forested wetland (BMP 12.5). A small, three acre patch of scrub-shrub muskeg is located in the west central part of this unit. Use a low impact logging system which minimizes ground disturbance and provides at least partial log suspension on these wetlands (BMP 13.9). Roads have been located to avoid these wetlands to the maximum extent possible (BMP 14.2). Road construction that does take place on these wetlands should use overlay construction with minimal side ditching to minimize the effects upon groundwater flow (BMPs 12.5 and 14.3). About one acre of this unit consists of slopes greater than 72%. An on-site analysis of these slopes by the IDT soil scientist determined that the risk of potential impacts of accelerated erosion on downslope and downstream fish habitat, other beneficial uses of water and other resources was minimal and these slopes are included within the timber harvest unit (BMP 13.2).

TIMBER:

Planned logging systems design for this unit is Running Skyline. Confirm final road and landing locations.

WILDLIFE:

Marten guidelines apply: maintain 10-20% of canopy, average 4 large trees/acre (20-30"+), average 3 snags per acre, average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 91

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, //sfiles/cel/libray/gis/scale/6/draftcard/draftcard.mxd



A B C D E F G H I J K L M N O P Q R S T U V W X Y Z



A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
Note: Compiled from various digital geographic data. This map may not meet National Map Accuracy Standards



Unit Data Card - Sea Level Draft EIS

Unit Number:	94	Planned Acres:	21.6	Silvicultural Systems:	CC, DEF	In Alternative:	none
LUD:	TP	Harvest Acres:	18.0	Quad:	ktnc4sw	Photo:	1390-34
Primary Watershed Code:	D91A	Primary WAA Number:	405	Management Area:	K35	VCU Number:	7460
Number of Settings:	3	Logging System:	LS	Total Estimated Harvest Volume (MBF):		534.9	

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	21.6	Cedar:	0.0	Mixed Hem/Spr:	0.0	Nonforested:	0.0	
Site Productivity Classes	Low:	0.0	Medium:	0.4	High:	21.2	Primary Aspect:				N
Volume Strata	Low:	0.0	Medium:	0.4	High:	21.2	Noncommercial:	0.0			
Visuals	Scen:	15.9	Not Scen:	2.1	Primary ROS Code:						RM
VQOs	PR:	0.0	MM:	0.0	M:	0.0	P:	0.0	R:	18.0	
VAC Rating	Low:	0.0	Intermediate:	12.1	High:	9.6	Roadless:				0.0
Mass Movement Index	Low:	0.4	Medium:	20.1	High:	1.1	Very High:	0.0	Slopes Greater Than 72%:	0.6	
Wetland Type	Forested Wetlands:		0.4								
TLMP High Value Marten Habitat	21.6										

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS: No Concerns

FISH/WATERSHED: Class III HC2 north: Sideslope S&G buffer to form unit boundary.

GEOLOGY:

No concerns.

LANDS:

No concerns.

RECREATION/VISUALS: No concerns.

SILVICULTURE:

Highly productive. Clearcut harvest 18 acres. Stand should regenerate naturally. Harvest deferred on 3.6 acres to meet Marten standards (see wildlife). CT 10/22/97

SOILS:

A small area of forested wetlands is located in the north part of this unit (BMP 12.5). A small area of high landslide potential (MMI=3) soils are found in the west-central part of the unit (BMP 13.5). Use a low impact logging system which minimizes ground disturbance and provides at least partial log suspension when yarding on these wetland and high landslide potential areas (BMP 13.9). Roads have been located to avoid these wetland and high land slide potential areas (BMP 14.2).

TIMBER:

Planned logging systems design for this unit is Live Skyline. Confirm final road and landing locations.

WILDLIFE:

Marten guidelines apply: maintain 10-20% of canopy, average 4 large trees/acre (20-30"+), average 3 snags per acre, average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

Unit Number:	98	Planned Acres:	29.7	Silvicultural Systems:	CC, DEF	In Alternative:	none
LUD:	TP	Harvest Acres:	19.0	Quad:	ktnc4sw	Photo:	1390-35
Primary Watershed Code:	113A 114A	Primary WAA Number:	405	Management Area:	K35	VCU Number:	7460
Number of Settings:	7	Logging System:	RS	Total Estimated Harvest Volume (MBF):	565.4		

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	29.7	Cedar:	0.0	Mixed Hem/Spr:	0.0	Nonforested:	0.0
Site Productivity Classes	Low:	0.0	Medium:	3.2	High:	26.5	Primary Aspect:			WSW
Volume Strata	Low:	0.0	Medium:	0.9	High:	28.8	Noncommercial:	0.0	Primary ROS Code:	
Visuals	Seen:	2.6	Not Seen:	16.4						RM
VQOs	PR:	0.0	MM:	0.0	M:	0.0	P:	0.0	R:	19.0
VAC Rating	Low:	0.0	Intermediate:	7.3	High:	22.4	Roadless:			0.0
Mass Movement Index	Low:	0.9	Medium:	0.0	High:	28.8	Very High:	0.0	Slopes Greater Than 72%:	2.5
Wetland Type										
TLMP High Value High Habitat		29.7								

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS: No Concerns

FISH/WATERSHED: Class II (direct) HC2 south: Greater of 100 foot or RMA (top of V-notch) buffer required.

GEOLOGY:

High land slide potential. See Soils for mitigation measures.

LANDS:

No concerns.

RECREATION/VISUALS: No concerns.

SILVICULTURE:

Highly productive. Clearcut harvest 19.7 acres. Stand should regenerate naturally. Harvest deferred on 10 acres to meet Marten standards (see wildlife). CT 10/22/97

SOILS:

This unit is made up mainly of high landslide potential (MMI=3) soils (BMP 13.5). About ten acres of the MMI=3 soils have been included in deferral areas (BMP 13.1). Use a low impact logging system which minimizes ground disturbance and provides at least partial log suspension when yarding (BMP 13.9). Road construction on these steep slopes may require full-bench design (BMP 14.7). Limit blasting for road construction and rock pit development when the soil is saturated (BMP 14.6). 2.5 acres of this unit has slopes greater than 72%. An on-site analysis of these slopes by the IDT soil scientist determined that the risk of potential impacts of accelerated erosion on downslope and downstream fish habitat, other beneficial uses of water and other resources was minimal and these slopes are included within the timber harvest unit (BMP 13.2).

TIMBER:

Planned logging systems design for this unit is Running Skyline. Confirm final road and landing locations.

WILDLIFE:

Marten guidelines apply: maintain 10-20% of canopy, average 4 large trees/acre (20-30"+), average 3 snags per acre, average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 98

Mapscale 1:12000 (5 inch to mile)

Created 11-17-1997, //s:/files/cel/library/gis/sealevel/draftcard/draftcard.mxd



Note: Compiled from various digital geographic data. This map may not meet National Map Accuracy Standards



Unit Data Card - Sea Level Draft EIS

Unit Number:	99	Planned Acres:	28.4	Silvicultural Systems:	CC, DEF	In Alternative:	none
LUD:	TP	Harvest Acres:	14.5	Quad:	ktnc4sw	Photo:	1390-33
Primary Watershed Code:	113A 114A	Primary WAA Number:	405	Management Area:	K35	VCU Number:	7460
Number of Settings:	7	Logging System:	RS	Total Estimated Harvest Volume (MBF):	433.6		

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	27.7	Cedar:	0.0	Mixed Hem/Spr:	0.7	Nonforested:	0.0			
Site Productivity Classes	Low:	0.0	Medium:	27.7	High:	0.8	Primary Aspect:				W		
Volume Strata	Low:	0.0	Medium:	0.0	High:	28.4	Noncommercial:	0.0	Primary ROS Code:			RM	
Visuals	Seen:	0.0	Not Seen:	14.5	R:								14.5
VQOs	PR:	0.0	MM:	0.0	M:	0.0	P:	0.0	Roadless:			28.2	
VAC Rating	Low:	0.0	Intermediate:	0.0	High:	28.4	Slopes Greater Than 72%:						1.5
Mass Movement Index	Low:	0.0	Medium:	0.0	High:	28.4	Very High:	0.0	Roadless:				28.2
Wetland Type	Forested Wetland:			18.4	Roadless:								28.2
TLMP High Value Marten Habitat	28.4												

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS: No Concerns

FISH/WATERSHED:

Class II (direct) HC2 southeast: HC2 south: Greater of 100 foot or RMA (top of V-notch) buffer required.

Class II (direct) AF2 south: Greater of 140 foot or alluvial fan RMA buffer required.

Class II (direct) FP4 north: Greater of 130 foot or floodplain RMA buffer required.

Class II (direct) LC2 north: Greater of 100 foot or RMA (top of V-notch) buffer required.

Class I LC2 southwest: Greater of 100 foot or RMA (top of V-notch) buffer required.

GEOLOGY:

High landslide potential.. See Soils for mitigation measures.

LANDS:

No concerns.

RECREATION/VISUALS: No concerns.

SILVICULTURE:

Moderately productive. Use small patch cuts to harvest 14 acres. Leave approximately 14 acres unharvested to meet Marten standards (see wildlife). Patches should regenerate naturally. CT 10/21/97

SOILS:

Unit is made up of high landslide potential (MMI=3) soils (BMP 13.5). About fourteen acres of MMI=3 soils have been included in deferral areas (BMP 13.1). Much of the eastern part of the unit consists of forested wetlands (BMP 12.5). Use a low impact logging system which minimize ground disturbance and provides at least partial log suspension when yarding (BMP 13.9). Road construction may require full-bench design on these steep slopes (BMP 14.7). Avoid fill slopes on high landslide potential areas (BMP 14.7). Limit blasting for road construction when the soil is saturated (BMP 14.6). Avoid the use of wetlands for the disposal of overburden or other fill material (BMP 14.19). About 1.5 acres of this unit consist of slopes greater than 72%. An on-site analysis of these slopes by the IDT soil scientist determined that the risk of potential impacts of accelerated erosion on downslope and downstream fish habitat, other beneficial uses of water and other resources was minimal and these slopes are included within the timber harvest unit (BMP 13.2).

TIMBER:

Planned logging systems design for this unit is Running Skyline. Confirm final road and landing locations.

WILDLIFE:

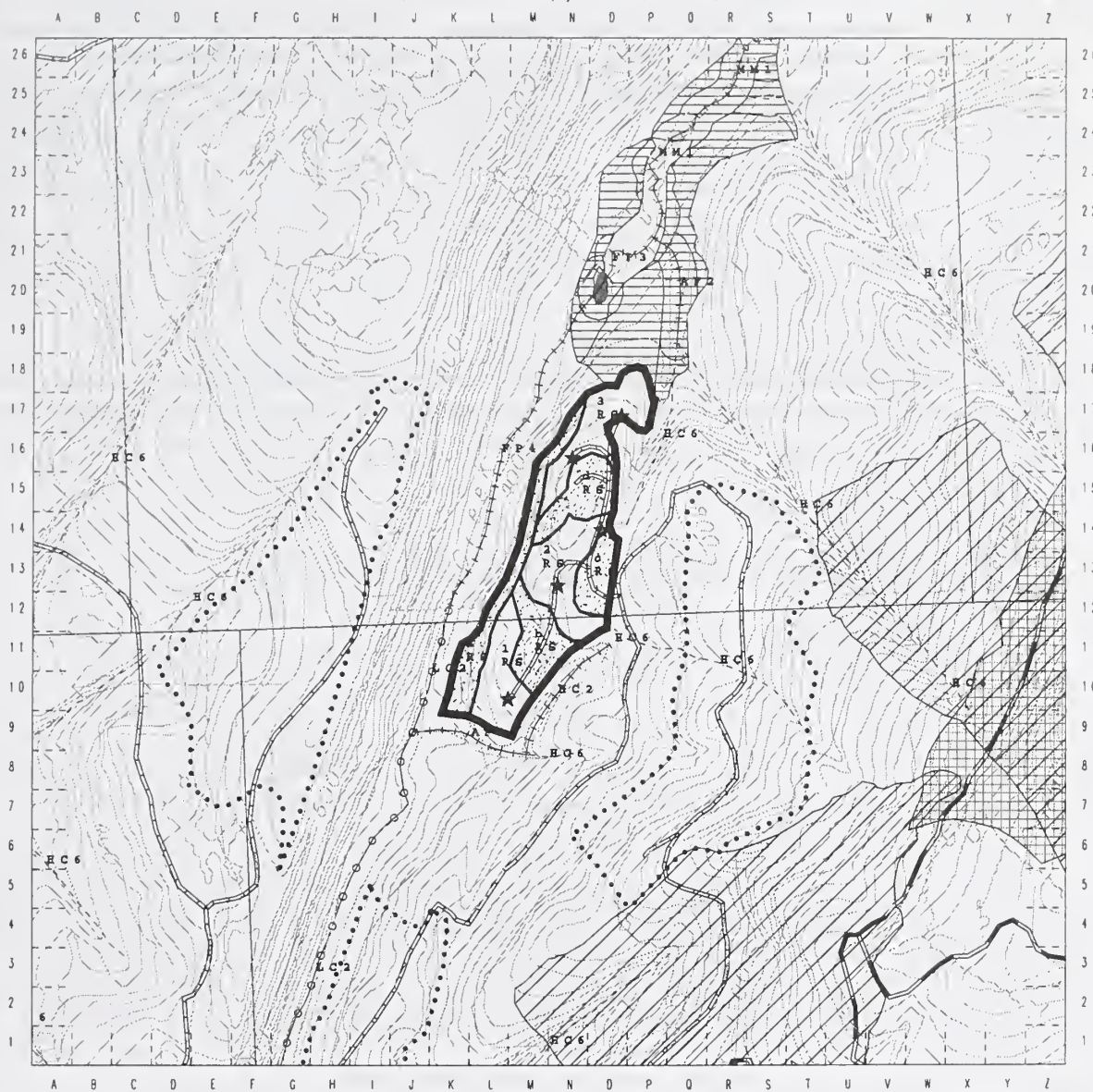
Marten guidelines apply: maintain 10-20% of canopy, average 4 large trees/acre (20-30"+), average 3 snags per acre, average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 99

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, J:\files\ref\library\gis\sealevel\draftcard\draftcard.mxd



Note: Compiled from various digital geographic data. This map may not meet National Map Accuracy Standards

- | | | | |
|--|-----------------------|--|---------------------------------|
| | Class 1 Stream | | Stream, Beach or Estuary Buffer |
| | Class 2 Stream | | Private Land |
| | Class 3 Stream | | Riparian Soil Buffer |
| | Section Line | | Body of Water |
| | Planning Roads | | Prior Harvest |
| | Unit Boundary | | Deferred from Harvest |
| | Settling Line | | Mass Movement Index 4 Soil |
| | Contour or Ortho line | | |
| | Other Sealevel | | |

Low Volume - 0
 Medium Volume - 0
 High Volume - 15
 Unknown Volume - 0
 Total Acres - 28
 Potential MBF - 509
 Quarter Quad - kincise
 VCU Number - 7460
 Photo Number - 1390033
 Alternative Pattern - 00000
 * Landing

LOGGING SYSTEMS Abbrev.

RS Running Skyline
 HE Helicopter
 HL High Lead
 SL Slack Line
 SH Shovel Yarding

Projection - Stateplane



Eagle Nest



Unit Data Card - Sea Level Draft EIS

Unit Number:	100	Planned Acres:	46.0	Silvicultural Systems:	CC, DEF	In Alternative:	none
LUD:	TP	Harvest Acres:	34.3	Quad:	ktnc4sw	Photo:	1390-34
Primary Watershed Code:	D91A	Primary WAA Number:	405	Management Area:	K35	VCU Number:	7460
Number of Settings:	12	Logging System:	RS	Total Estimated Harvest Volume (MBF): 1,020.0			

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	45.9	Cedar:	0.0	Mixed Hcm/Spr:	0.1	Nonforested:	0.0	
Site Productivity Classes	Low:	0.0	Medium:	1.4	High:	44.6	Primary Aspect:				W
Volume Strata	Low:	0.0	Medium:	0.0	High:	46.0	Noncommercial:	0.0			
Visuals	Seen:	6.6	Not Seen:	27.7	Primary ROS Code:						RM
VQOs	PR:	0.0	MM:	0.0	M:	0.0	P:	0.0	R:	34.3	
VAC Rating	Low:	0.0	Intermediate:	12.9	High:	33.2	Roadless:				46.0
Mass Movement Index	Low:	0.0	Medium:	0.0	High:	46.0	Very High:	0.0	Slopes Greater Than 72%:		5.1
Wetland Type	Forested Wetland:		6.9								
TLMP High Value Marten Habitat	46.0										

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS: No Concerns

FISH/WATERSHED:

Class III HC6 center: Sideslope S&G buffer (top of V-notch), split yard or full suspension required.
Class III HC6 northeast: Sideslope S&G buffer (top of V-notch), split yard or full suspension required

GEOLOGY:

High landslide potential. See Soils for mitigation measures.

LANDS:

No concerns.

RECREATION/VISUALS: No concerns.

SILVICULTURE:

Highly productive. Clearcut harvest 33 acres. Plant 5 acres with AYC the remainder of the stand should regenerate naturally. Harvest deferred on 13 acres to meet Marten standards (see wildlife). CT 10/22/97

SOILS:

High landslide potential throughout most of this unit (BMP 13.5). 11.8 acres of the high landslide potential areas have been included in deferral areas (BMP 13.1). At least partial log suspension will be needed when yarding (BMP 13.9). Roads may require full-bench design (BMP 14.7). End-haul and dispose of waste material on a stable site (BMP 14.12). Forested wetlands are located in the north and south ends of this unit (BMP 12.5). Recommend that a low impact yarding system, that provides at least partial log suspension when logging be used on these wetlands (BMP 13.9). Avoid locating roads and landings on these wetlands (BMP 14.2), if possible. Do not dispose of waste material on these wetlands (BMP 14.12). 5.1 acres of this unit consist of slopes greater than 72%. An on-site analysis of these slopes by the IDT soil scientist determined that the risk of potential impacts of accelerated erosion on downslope and downstream fish habitat, other beneficial uses of water and other resources was minimal and these slopes are included within the timber harvest unit (BMP 13.2).

TIMBER:

Planned logging systems design for this unit is Running Skyline. Confirm final road and landing locations.

WILDLIFE:

Marten guidelines apply: maintain 10-20% of canopy, average 4 large trees/acre (20-30"+), average 3 snags per acre, average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 100

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, //files/rel/libraries/sealevel/draftcard4/draftcard.aml



	Class 1 Stream		Stream, Beach or Estuary Buffer
	Class 2 Stream		Private Land
	Class 3 Stream		Riparian Soil Buffer
	Section Line		Body of Water
	Planning Roads		Prior Harvest
	Unit Boundary		Deferred from Harvest
	Setting Line		Mass Movement Index 4 Soil
	Contour or Ortho line		
	Other Sealevel		

Low Volume - 0
 Medium Volume - 0
 High Volume - 34
 Unknown Volume - 0
 Total Acres - 46
 Potential MBF - 1198
 Quarter Quad - klotse
 VCU Number - 7460
 Photo Number - 1390034
 Alternative Pattern - 00000
 * Landing

LOGGING SYSTEMS Abbrev.

RS Running Skyline
 HE Helicopter
 HL High Lead
 SL Slack Line
 SH Shovel Yarding

Projection - Stateplane



Eagle Nest



Unit Data Card - Sea Level Draft EIS

Unit Number:	105	Planned Acres:	43.7	Silvicultural Systems:	CC, DEF	In Alternative:	none
LUD:	TP	Harvest Acres:	34.1	Quad:	ktne4sw	Photo:	1390-33
Primary Watershed Code:	D92A	Primary WAA Number:	405	Management Area:	K35	VCU Number:	7460
Number of Settings:	7	Logging Systems:	RS, SH	Total Volume Estimated Harvest (MBF):	924.4		

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	43.7	Cedar:	0.0	Mixed Hem/Spr:	0.0	Nonforested:	0.0	
Site Productivity Classes	Low:	0.0	Medium:	38.8	High:	4.9	Primary Aspect:				E
Volume Strata	Low:	13.5	Medium:	19.8	High:	10.4	Noncommereial:	0.0			
Visuals	Seen:	22.1	Not Seen:	12.0	Primary ROS Code:						RM
VQOs	PR:	0.0	MM:	0.0	M:	0.0	P:	0.0	R:	34.1	
VAC Rating	Low:	0.0	Intermediate:	25.3	High:	18.4	Roadless:				9.1
Mass Movement Index	Low:	0.0	Medium:	42.5	High:	1.2	Very High:	0.0	Slopes Greater Than 72%:		0.9
Wetland Type	Forested Wetland:		25.5	Scrub-Shrub Muskeg:			2.2				
TLMP High Value Marten Habitat	10.5										

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS: No Concerns

FISH/WATERSHED:

Class III HC6 north: Sideslope S&G buffer (top of V-notch) to form unit boundary, 100 foot buffer applied

GEOLOGY:

No concerns.

LANDS:

RECREATION/VISUALS: No concerns.

SILVICULTURE:

Moderately productive. Clearcut harvest 33.7 acres. Plant 5 acres with AYC and SS the remainder of the stand should regenerate naturally. Harvest deferred on 10 acres to meet Marten standards (see wildlife). CT 10/22/97

SOILS:

The central part of this unit consists of forested wetlands (BMP 12.5). At least partial log suspension will be required when yarding this area (BMP 13.9). Avoid locating roads on these wetlands (BMP 14.2), if possible. These wetlands should not be used as disposal sites for waste material (BMP 14.12). About an acre of this unit consist of slopes greater than 72%. An on-site analysis of these slopes by the IDT soil scientist determined that the risk of potential impacts of accelerated erosion on downslope and downstream fish habitat, other beneficial uses of water and other resources was minimal and these slopes are included within the timber harvest unit (BMP 13.2).

TIMBER:

Planned logging systems design for this unit is Running Skyline and Shovel. Confirm final road and landing locations.

WILDLIFE:

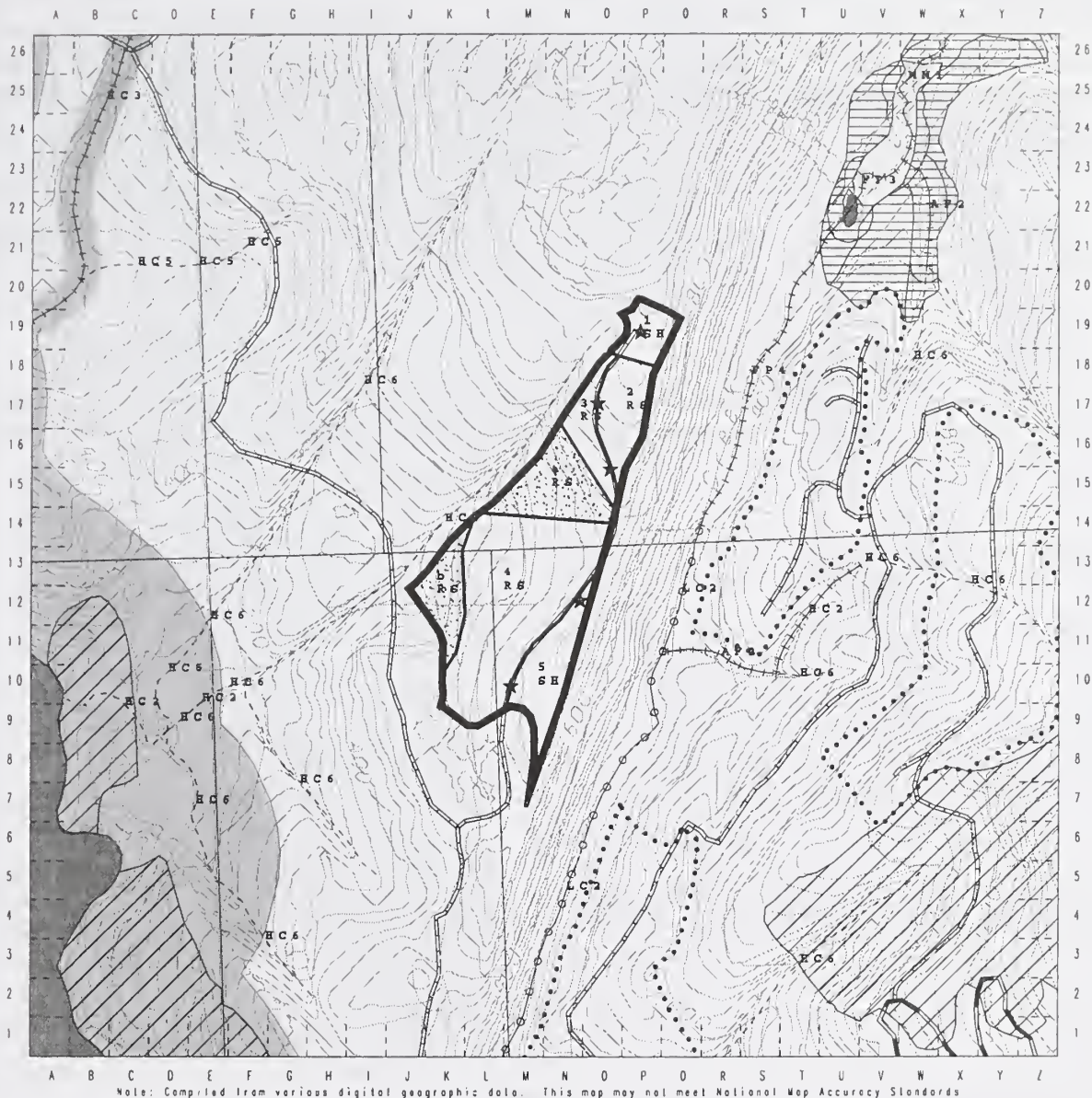
Marten guidelines apply: maintain 10-20% of canopy, average 4 large trees/acre (20-30"+), average 3 snags per acre, average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 105

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, //file:///c:/libray/gis/sealevel/draftcard/draftcard.eml



<ul style="list-style-type: none"> Class 1 Stream Class 2 Stream Class 3 Stream Section Line Planning Roads Unit Boundary Setting Line Contour or Ortho line Other Sealevel 	<ul style="list-style-type: none"> Stream, Beach or Estuary Buffer Private Land Riparian Soil Buffer Body of Water Prior Harvest Deferred from Harvest Mass Movement Index & Soil 	<ul style="list-style-type: none"> Low Volume - 13 Medium Volume - 14 High Volume - 7 Unknown Volume - 0 Total Acres - 44 Potential MBF - 816 Quarter Quad - 44444 VCU Number - 7460 Photo Number - 1390033 Alternative Pollen - 00000 * Landing
--	--	---

LOGGING SYSTEMS Abbrev.

RS Running Skyline
 HC Helicopter
 HL High Lead
 SL Slack Line
 SH Shovel Yarding

Projection - Stateplane

0 526 1056 1582 2112 Feet

Eagle Nest

Unit Data Card - Sea Level Draft EIS

Unit Number:	113	Planned Acres:	16.7	Silvicultural Systems:	CC, DEF	In Alternatives:	2, 3, 4
LUD:	TP	Harvest Acres:	12.4	Management Area:	K35	VCU Number:	7570
Primary Watershed Code:	FA3A	Primary WAA Number:	405	Quad:	ktnb4sw	Photo:	1390-138
Number of Settings:	6	Logging System:	RS	Total Estimated Harvest Volume (MBF):	595.5		

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	0.3	Cedar:	0.0	Mixed Hem/Spr:	16.4	Nonforested:	0.0		
Site Productivity Classes	Low:	0.0	Medium:	16.7	High:	0.0	Primary Aspect:				NE	
Volume Strata	Low:	0.0	Medium:	0.0	High:	16.4	Noncommercial:	0.3				
Visuals	Seen:	12.4	Not Seen:	0.0					Primary ROS Code:			RM
VQOs	PR:	0.0	MM:	12.4	M:	0.0	P:	0.0	R:	0.0		
VAC Rating	Low:	0.4	Intermediate:	15.8	High:	0.6					Roadless:	0.0
Mass Movement Index	Low:	0.0	Medium:	1.0	High:	15.7	Very High:	0.0	Slopes Greater Than 72%:			0.8
Wetland Type												
TLMP High Value Marten Habitat	16.7											

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS: No Concerns

FISH/WATERSHED:

Class I MMI east: Greater of 120 foot or RMA buffer required.

GEOLOGY:

High landslide potential. See Soils for mitigation measures..

LANDS:

No concerns.

RECREATION/VISUALS: No concerns.

SILVICULTURE:

Moderately productive. Clearcut harvest 12 acres. Stand should regenerate naturally. Harvest deferred on 5 acres to meet Marten standards (see wildlife). CT 10/22/97

SOILS:

Most of this unit consists of high landslide potential (MMI=3) soils (BMP 13.5). 3.3 acres of the MMI=3 soils have been included in deferral areas (BMP 13.1). Use a low impact logging system which minimizes ground disturbance and provides at least partial log suspension when yarding (BMP 13.9). Road construction will require some full-bench design in the southeast part of the unit (BMP 14.7). Avoid blasting for road construction and rock pit development when soils are saturated (BMP 14.6).

TIMBER:

Planned logging systems design for this unit is Running Skyline. Confirm final road and landing locations.

WILDLIFE:

Unit is within 0.5 miles of two bald eagle nests. Follow Interagency Agreement. Blasting prohibited within 0.5 mile of nests March 1 through May 31. If nest is determined active, blasting prohibited within 0.5 mile of nest June 1 through August 31. Marten guidelines apply: maintain 10-20% of canopy, average 4 large trees/acre (20-30"+), average 3 snags per acre, average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 113

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, //files/csl/library/gis/sealevel/draftcard/draftcard.mxd



Note: Compiled from various digital geographic data. This map may not meet National Map Accuracy Standards

	Class 1 Stream		Stream, Beach or Estuary Buffer
	Class 2 Stream		Private Land
	Class 3 Stream		Riparian Soil Buffer
	Section Line		Body of Water
	Planning Road		Prior Harvest
	Unit Boundary		Deferred from Harvest
	Fetting Line		Mass Movement Index 4 Soil
	Contour or Ortho line		
	Other Sealevel		

Low Volume - 0
 Medium Volume - 0
 High Volume - 12
 Unknown Volume - 0
 Total Acres - 17
 Potential MBF - 424
 Quarter Quad - 4164w
 VCU Number - 7570
 Photo Number - 1390138
 Alternative Pattern - 23400
 * Lending

LOGGING SYSTEMS Abbrev.

RS Running Skyline
 HE Helicopter
 HL High Lead
 SL Slick Line
 SH Shovel Yarding

Projection - Stateplane



Eagle Nest



Unit Data Card - Sea Level Draft EIS

Unit Number:	115	Planned Acres:	12.1	Silvicultural System:	DEF	In Alternatives:	none
LUD:	TP	Harvest Acres:	0	Management Area:	K35	VCU Number:	7570
Primary Watershed Code:	E84A	Primary WAA Number:	405	Quad:	ktnb4sw	Photo:	1390-138
Number of Settings:	0	Logging System:	NA	Total Estimated Harvest Volume (MBF):			0

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	12.1	Cedar:	0.0	Mixed Hem/Spr:	0.0	Nonforested:	0.0	
Site Productivity Classes	Low:	0.0	Medium:	12.1	High:	0.0	Primary Aspect:				W
Volume Strata	Low:	0.0	Medium:	4.1	High:	8.0	Noncommercial:	0.0			
Visuals	Seen:	10.8	Not Seen:	1.3	Primary ROS Code:						RM
VQOs	PR:	0.0	MM:	0.0	M:	0.0	P:	0.0	R:	0.0	
VAC Rating	Low:	7.3	Intermediate:	2.0	High:	2.7	Roadless:				0.0
Mass Movement Index	Low:	12.1	Medium:	0.0	High:	0.0	Very High:	0.0	Slopes Greater Than 72%:	0.0	
Wetland Type	Forested Wetland:		12.1								
TLMP High Value Marten Habitat	7.5										

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS: No Concerns

FISH/WATERSHED:

Class I MMI (adfluvial) northeast: Greater of 120 foot or RMA buffer required.

Class II HC4 north: Greater of 100 foot or RMA (top of V-notch) buffer required.

Class III HC4 northeast: Sideslope S&G buffer (top of V-notch), split yard or full suspension required.

Class III HC6 northwest: Sideslope S&G buffer (top of V-notch), split yard or full suspension required, consider 50-75 additional for windfirmness.

GEOLOGY:

No concerns.

LANDS:

No concerns.

RECREATION/VISUALS:

SILVICULTURE:

SOILS:

This entire unit consists of forested wetlands (BMP 12.5). Use a low impact logging system on this unit, which provides at least partial log suspension when yarding (BMP 13.9). Use overlay road construction and minimize side ditching, where practicable, to minimize the effects upon groundwater and alteration of wetness (BMPs 12.5 and 14.3). Avoid the use of these wetlands for the disposal of overburden and logging slash (BMP 14.19).

TIMBER:

WILDLIFE:

Marten guidelines apply: maintain 10-20% of canopy, average 4 large trees/acre (20-30"+), average 3 snags per acre, average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 115

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, /1a11ee/rel/library/gis/sealer8/draftcard/draftcard.mxd



Note: Compiled from various digital geographic data. This map may not meet National Map Accuracy Standards

	Class 1 Stream		Stream, Beach or Wetland Buffer
	Class 2 Stream		Private Land
	Class 3 Stream		Riparian Soil Buffer
	Section Line		Body of Water
	Planning Road		Prior Harvest
	Unit Boundary		Deferred from Harvest
	Settling Line		Mass Movement Index 4 Soil
	Contour or Ortho line		
	Other Sealevel		

Low Volume - 0
 Medium Volume - 0
 High Volume - 0
 Unknown Volume - 0
 Total Acres - 12
 Potential MBF - 0
 Quarter Quad - klabise
 VCU Number - 7570
 Photo Number - 1390138
 Alternative Pattern - 00000
 * Landing

LOGGING SYSTEMS Abbrev.

RS Running Skyline
 HE Helicopter
 HL High Lead
 SL Slack Line
 SH Shovel Yarding

Projection - Stateplane



Eagle Nest



Unit Data Card - Sea Level Draft EIS

Unit Number:	118	Planned Acres:	48.6	Silvicultural System:	CC	In Alternatives:	2, 3, 4
LUD:	TP	Harvest Acres:	48.6	Quad:	ktnb4sw	Photo:	1390-139
Primary Watershed Code:	E82A	Primary WAA Number:	405	Management Area:	K35	VCU Number:	7570
Number of Settings:	6	Logging System:	RS	Total Estimated Harvest Volume (MBF):	1,205.8		

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	48.6	Cedar:	0.0	Mixed Hem/Spr:	0.0	Nonforested:	0.0	
Site Productivity Classes	Low:	0.0	Medium:	22.9	High:	25.7	Primary Aspect:				W
Volume Strata	Low:	0.0	Medium:	48.6	High:	0.0	Noncommercial:	0.0			
Visuals	Seen:	42.6	Not Seen:	6.0	Primary ROS Code:						RM
VQOs	PR:	0.0	MM:	48.6	M:	0.0	P:	0.0	R:	0.0	
VAC Rating	Low:	4.7	Intermediate:	41.7	High:	2.3	Roadless:				48.6
Mass Movement Index	Low:	0.0	Medium:	0.0	High:	48.6	Very High:	0.0	Slopes Greater Than 72%:	3.7	
Wetland Type			Forested Wetland:	19.8							
TLMP High Value Marten Habitat	0										

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS: No Concerns

FISH/WATERSHED:

Class II (non-direct) HC1 north: Greater of 100 foot or RMA (top of V-notch) buffer required.
Class III HC6 west: Sideslope S&G buffer to form unit boundary.

GEOLOGY:

High landslide potential areas. See Soils for mitigation measures.

LANDS:

No concerns.

RECREATION/VISUALS: No concerns.

SILVICULTURE:

Moderately productive. Clearcut harvest 48.6 acres. Stand should regenerate naturally. CT 10/22/97

SOILS:

Unit includes high landslide potential (MMI=3) soils (BMP 13.5). Unit contains almost twenty acres of forested wetlands (BMP 12.5). Use a low impact logging system on these high landslide potential and wetlands areas. Minimize ground disturbance and provide at least partial log suspension when yarding (BMP 13.9). Roads have been located to avoid wetland areas (BMP 14.2). The planned road alignment also avoid much of the potentially unstable slopes (BMP 14.2). However some road segments may require full-bench design in the southwest and central parts of the unit (BMP 14.7) to maintain slope stability. Limit blasting for road construction and rock pit development when soils are saturated (BMPs 14.6 and 14.18). About 3.7 acres of this unit consist of slopes greater than 72%. An on-site analysis of these slopes by the IDT soil scientist determined that the risk of potential impacts of accelerated erosion on downslope and downstream fish habitat, other beneficial uses of water and other resources was minimal and these slopes are included within the timber harvest unit (BMP 13.2).

TIMBER:

Planned logging systems design for this unit is Running Skyline. Confirm final road and landing locations.

WILDLIFE:

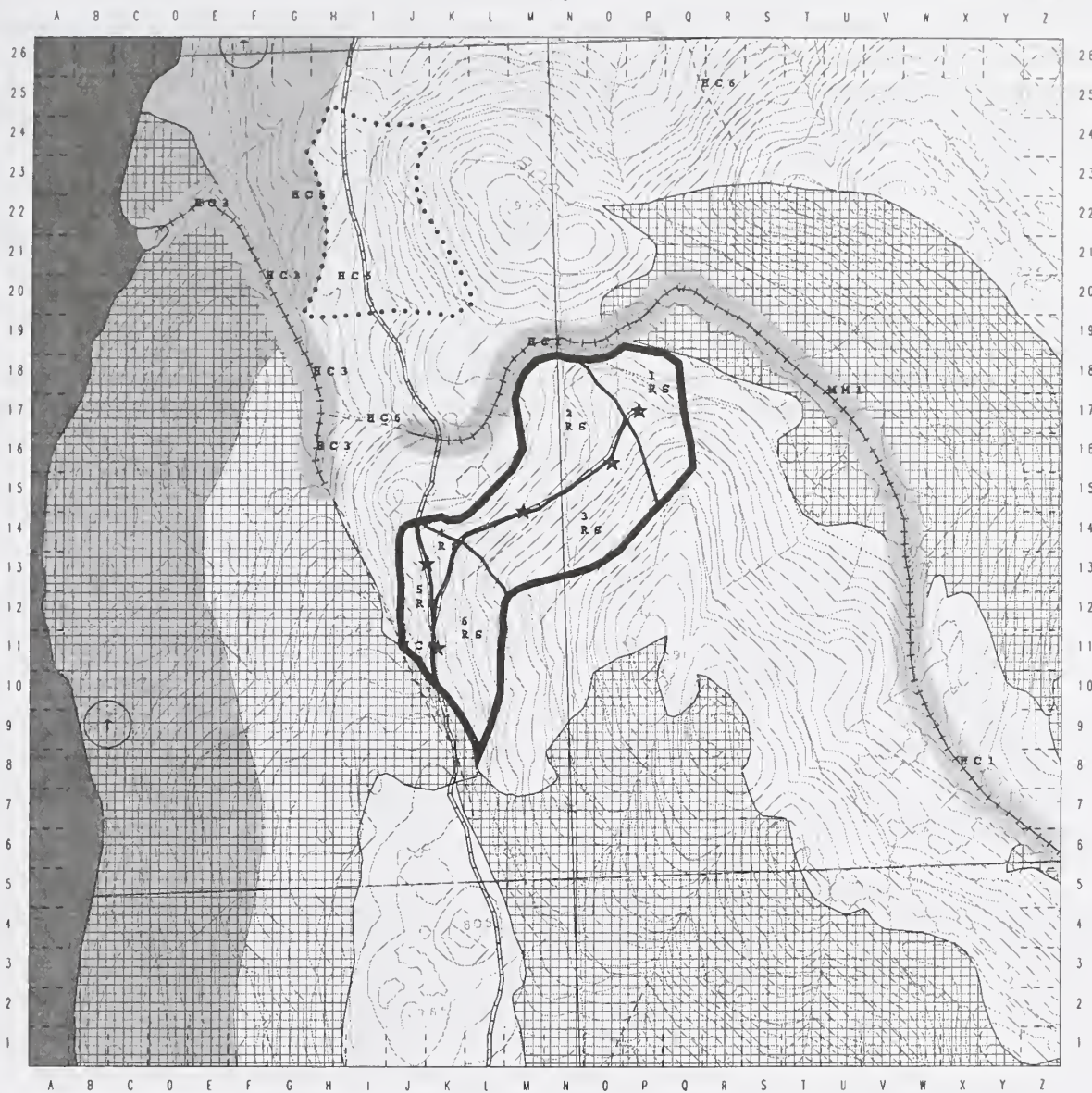
Southwest portion of the unit is within 0.5 miles of bald eagle nest. Follow Interagency Agreement. Blasting prohibited within 0.5 mile of nest March 1 through May 31. If nest is determined active, blasting prohibited within 0.5 mile of nest June 1 through August 31.

Unit Data Card - Sea Level Draft EIS

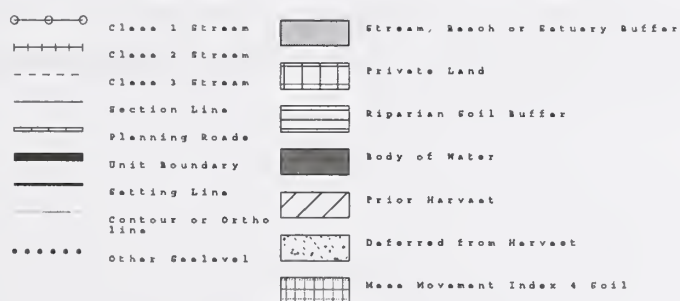
Sealevel Study Area Unit Schematic - Draft Unit 118

Map scale 1:12000 (5 inch to Mile)

Created 11-17-1997, //files/csl/library/gis/usa/us6/drulcadd/drulcadd.xml



Note: Compiled from various digital geographic data. This map may not meet National Map Accuracy Standards



Low Volume - 0
Medium Volume - 49
High Volume - 0
Unknown Volume - 0
Total Acres - 49
Potential MBF - 1274
Quarter Quad - ktnb4sw
VCU Number - 7570
Photo Number - 1390139
Alternative Pattern - 23400

★ L o n d i n g

Eagle Nest 1

feet



LOGGING SYSTEMS Abbrev.

RS Running Skyline

HE Helicopter

HL High Lead

SL Stock Line

SH Shovel Yarding

Projection - Stoleplane

Unit Data Card - Sea Level Draft EIS

Unit Number:	119	Planned Acres:	21.2	Silvicultural Systems:	CC, DEF	In Alternatives:	2, 3, 4
LUD:	TP	Harvest Acres:	16.4	Quad:	ktnb4sw	Photo:	1390-140
Primary Watershed Code:	E82A	Primary WAA Number:	405	Management Area:	K35	VCU Number:	7570
Number of Settings:	7	Logging System:	RS	Total Estimated Harvest Volume (MBF):		472.2	

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	21.2	Cedar:	0.0	Mixed Hem/Spr:	0.0	Nonforested:	0.0			
Site Productivity Classes	Low:	0.0	Medium:	20.7	High:	0.5	Primary Aspect:				W		
Volume Strata	Low:	0.0	Medium:	3.6	High:	17.6	Noncommercial:	0.0	Primary ROS Code:			RM	
Visuals	Seen:	16.4	Not Seen:	0.0	R:								0.0
VQOs	PR:	0.0	MM:	0.0	M:	16.4	P:	0.0	Roadless:				16.4
VAC Rating	Low:	21.0	Intermediate:	0.2	High:	0.0	Slopes Greater Than 72%:						4.0
Mass Movement Index	Low:	0.0	Medium:	0.0	High:	21.2	Very High:	0.0	Forested Wetland:				0.8
Wetland Type													
TLMP High Value Marten Habitat	18.2												

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS: No Concerns

FISH/WATERSHED:

Class II (non-direct) HC3 southwest: Greater of 100 foot or RMA (top of V-notch) buffer required.

Class IV HC5 (2 each) center: Split yard or partial suspension required.

GEOLOGY:

High landslide potential in this unit. See **Soils** for mitigation measures.

LANDS:

No concerns.

RECREATION/VISUALS: No concerns.

SILVICULTURE:

Moderately productive. Clearcut harvest 16 acres. Plant 3 acres with AYC the remainder of the stand should regenerate naturally. Harvest deferred on 5 acres to meet Marten standards (see wildlife). CT 10/22/97

SOILS:

This unit contains high landslide potential (MMI=3) soils (BMP 13.5). 4.8 acres of the MMI=3 soils have been placed in deferral areas (BMP 13.1). This unit also contains a small area of forested wetland (BMP 12.5). Use a low impact logging system on these areas, which minimizes ground disturbance and provides at least partial log suspension when yarding (BMP 13.9). The planned access road is located on a bench which avoids areas of wetlands and potentially unstable slopes (BMPs 12.5, 14.2 and 14.7). This unit contains 4.0 acres of slopes greater than 72%. These slopes were placed in deferral areas.

TIMBER:

Planned logging system design for this unit is Running Skyline. Confirm final road and landing locations.

WILDLIFE:

Unit is within 0.5 miles of two bald eagle nests. Follow Interagency Agreement. Blasting prohibited within 0.5 mile of nests March 1 through May 31. If nest is determined active, blasting prohibited within 0.5 mile of nest June 1 through August 31.

Maintain 1000 foot beach/cstuary buffer.

Marten guidelines apply: maintain 10-20% of canopy, average 4 large trees/acre (20-30"+), average 3 snags pcr acre, average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 119

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, /s:/files/ref/library/gis/sealevel/draftcard/draftcard.mxd



Note: Compiled from various digital geographic data. This map may not meet National Map Accuracy Standards

- | | | | |
|--|-----------------------|--|---------------------------------|
| | Class 1 Stream | | Stream, Beach or Estuary Buffer |
| | Class 2 Stream | | Private Land |
| | Class 3 Stream | | Riparian Soil Buffer |
| | Section Line | | Body of Water |
| | Planning Roads | | Prior Harvest |
| | Unit Boundary | | Deferred from Harvest |
| | Setting Line | | Mass Movement Index 4 Soil |
| | Contour or Ortho line | | |
| | Other Sealevel | | |

Low Volume - 0
 Medium Volume - 4
 High Volume - 13
 Unknown Volume - 0
 Total Acres - 21
 Potential MBF - 544
 Quarter Quad - 414649
 VCU Number - 7570
 Photo Number - 1390140
 Alternative Pattern - 23400
 * Landing

LOGGING SYSTEMS Abbrev.

RS Running Skyline
 HE Helicopter
 HL High Lead
 SL Slack Line
 SH Shovel Yarding

Projection - Stateplane



Eagle Nest



Unit Data Card - Sea Level Draft EIS

Unit Number:	120	Planned Acres:	42.8	Silvicultural Systems:	CC, ITM, DEF	In Alternatives:	2, 3, 4
LUD:	ML	Harvest Acres:	38.8	Management Area:	K35	VCU Number:	7550
Primary Watershed Code:	E81A	Primary WAA Number:	405	Quad:	ktnb4sw	Photo:	1390-140
Number of Settings:	8	Logging Systems:	RS, HE, SH	Total Estimated Harvest Volume (MBF):		1,047.2	

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	42.8	Cedar:	0.0	Mixed Hem/Spr:	0.0	Nonforested:	0.0	
Site Productivity Classes	Low:	0.0	Medium:	0.0	High:	42.8	Primary Aspect: WNW				
Volume Strata	Low:	0.0	Medium:	1.7	High:	41.1	Noncommercial:	0.0			
Visuals	Seen:	38.8	Not Seen:	0.0					Primary ROS Code:	RN	
VQOs	PR:	19.3	MM:	0.0	M:	19.5	P:	0.0	R:	0.0	
VAC Rating	Low:	6.4	Intermediate:	36.0	High:	0.0	Roadless:				38.8
Mass Movement Index	Low:	0.0	Medium:	35.4	High:	7.3	Very High:	0.0	Slopes Greater Than 72%:	0.8	
Wetland Type	Forested Wetland:		12.8								
TLMP High Value Marten Habitat	40.8										

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS: No Concerns

FISH/WATERSHED:

Class III HC6 north: Sideslope S&G buffer to form unit boundary
 Class II (nondirect) HC2 northwest: Greater of 100 foot or RMA (top of V-notch) buffer required.
 Class III HC5 center to west: Sideslope S&G buffer (top of V-notch), split yard or full suspension required.
 Class III HC2 and HC6 southwest: Sideslope S&G buffer to form unit boundary

GEOLOGY:

High landslide potential in the eastern part of the unit. See Soils for mitigation measures.

LANDS:

No concerns.

RECREATION/VISUALS: No concerns.

SILVICULTURE:

Highly productive. Clearcut harvest 34 acres. Helicopter harvest 7 acres using a diameter limit prescription. Defer harvest on 4 acres to meet Marten standards (see wildlife). CT 10/21/97

SOILS:

The eastern part of this unit contains high landslide potential (MMI=3) soils (BMP 13.5). There is about 13 acres of forested wetlands in the central part of the unit (BMP 12.5). The use of a low impact logging system, such as running skyline, helicopter and shovel logging will minimize ground disturbance and provide partial or full log suspension when yarding on these sites (BMP 13.9). Access roads have been planned to avoid high landslide potential areas (BMP 14.2). Road construction on wetlands should use an overlay construction and minimize the amount of side ditching to reduce the effects upon groundwater flow and wetland moisture regimes (BMPs 12.5, 14.3). Avoid the use of wetlands for the disposal of waste material and logging slash (BMP 14.19). About an acre of this unit consist of slopes greater than 72%. An on-site analysis of these slopes by the IDT soil scientist determined that the risk of potential impacts of accelerated erosion on downslope and downstream fish habitat, other beneficial uses of water and other resources was minimal and these slopes are included within the timber harvest unit (BMP 13.2).

TIMBER:

Planned logging systems design for this unit is Running Skyline, Shovel, and Helicopter. Confirm final road and landing locations.

WILDLIFE:

Unit is within 0.5 miles of three bald eagle nests. Follow Interagency Agreement. Blasting prohibited within 0.5 mile of nests March 1 through May 31. If nest is determined active, blasting prohibited within 0.5 mile of nest June 1 through August 31. Avoid repeated helicopter flights (logging, heliports) within 0.25 mile of active nests.

Maintain 1000 foot beach/estuary buffer.

Marten guidelines apply: maintain 10-20% of canopy, average 4 large trees/acre (20-30"+), average 3 snags per acre, average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

Unit Number:	121	Planned Acres:	66.0	Silvicultural Systems:	CC, DEF	In Alternatives:	2, 3, 4
LUD:	TP	Harvest Acres:	51.5	Management Area:	K35	VCU Number:	7550
Primary Watershed Code:	FA2A	Primary WAA Number:	405	Quad:	ktnb4sw	Photo:	1390-141
Number of Settings:	11	Logging Systems:	RS, SH	Total Estimated Harvest Volume (MBF):		1,534.9	

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	66.0	Cedar:	0.0	Mixed Hem/Spr:	0.0	Nonforested:	0.0
Site Productivity Classes	Low:	0.0	Medium:	0.0	High:	66.0	Primary Aspect: NNW			
Volume Strata	Low:	0.0	Medium:	0.0	High:	66.0	Noncommercial:	0.0		
Visuals	Scen:	21.4	Not Seen:	30.1					Primary ROS Code:	RN
VQOs	PR:	0.0	MM:	30.1	M:	21.4	P:	0.0	R:	0.0
VAC Rating	Low:	0.0	Intermediate:	30.0	High:	36.0	Roadless: 51.5			
Mass Movement Index	Low:	0.2	Medium:	65.5	High:	0.3	Very High:	0.0	Slopes Greater Than 72%:	0.0
Wetland Type	Forested Wetland:		8.3							
TLMP High Value Marten Habitat	66.0									

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS: No Concerns

FISH/WATERSHED:

Class II (direct) MM1 northwest: Greater of 120 foot or RMA buffer required.
 Class II (direct) HC3 west: Greater of 100 foot or RMA (top of V-notch) buffer required.
 Class III HC5 west and central: Sideslope S&G buffer (top of V-notch), split yard or full suspension required.
 Class IV HC1 center north: Split yard or partial suspension required.
 Class IV HC1 south to northwest: Split yard or partial suspension required.
 Class IV HC1 center south to north: Split yard or partial suspension required.
 Class IV HC1 (two) north tributaries to MM1: Split yard or partial suspension required.

GEOLOGY:

No concerns.

LANDS:

No concerns.

RECREATION/VISUALS: No concerns.

SILVICULTURE:

Highly productive. Clearcut harvest 52 acres. Stand should regenerate naturally. Harvest deferred on 14 acres to meet Marten standards (see wildlife). CT 10/22/97

SOILS:

The eastern part of this unit contains about 8 acres of forested wetland (BMP 12.5). Use a low impact logging system which minimizes ground disturbance and provides at least partial log suspension when yarding (BMP 13.9). Road location has been planned to avoid these wetlands (BMP 14.2).

TIMBER:

Planned logging systems design for this unit is Running Skyline and Shovel. Confirm final road and landing locations.

WILDLIFE:

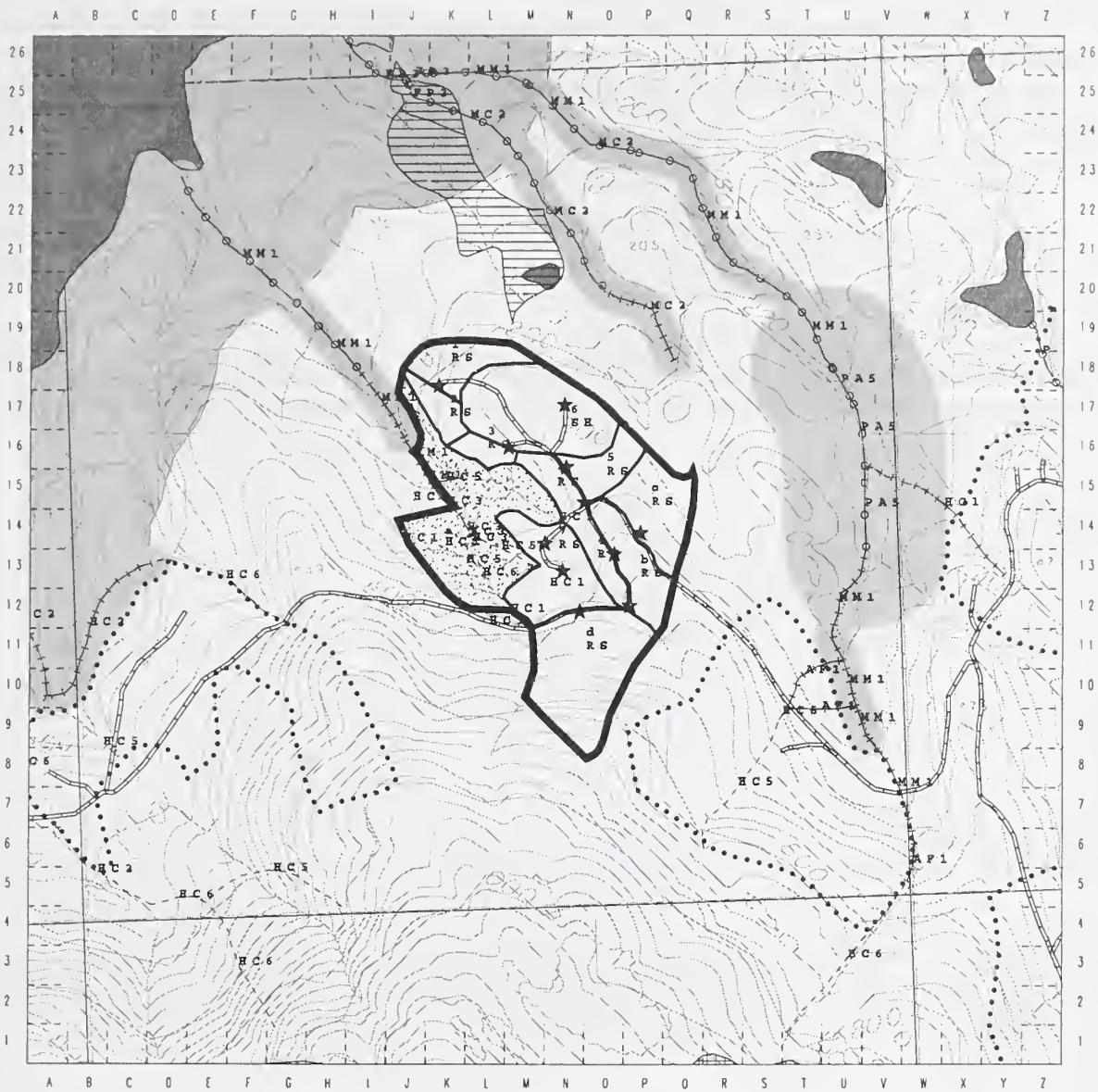
Marten guidelines apply: maintain 10-20% of canopy, average 4 large trees/acre (20-30"+), average 3 snags per acre, average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 121

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, //afiles/cel/library/gis/sealevel/draftcard/draftcard.mxd



Note: Compiled from various digital geographic data. This map may not meet National Map Accuracy Standards

- | | | |
|--------|-----------------------|---------------------------------|
| ○—○—○ | Class 1 Stream | Stream, Beach or Wettery Buffer |
| —+—+—+ | Class 2 Stream | Private Land |
| —+—+—+ | Class 3 Stream | Riparian Soil Buffer |
| —+—+—+ | Section Line | Body of Water |
| —+—+—+ | Planning Road | Prior Harvest |
| —+—+—+ | Unit Boundary | Deferred from Harvest |
| —+—+—+ | Settling Line | Mass Movement Index 4 Soil |
| —+—+—+ | Contour or Ortho line | |
| | Other Sealevel | |

Low Volume - 0
 Medium Volume - 0
 High Volume - 52
 Unknown Volume - 0
 Total Acres - 66
 Potential MBR - 1803
 Quarter Quad - 146450
 VCU Number - 7550
 Photo Number - 1390141
 Alternative Pattern - 23400
 * Landing

LOGGING SYSTEMS Abbrev.

RS Running Skyline
 HE Helicopter
 HL High Lead
 SL Slack Line
 SH Shovel Yarding

Projection - Stateplane



Eagle Nest



Unit Data Card - Sea Level Draft EIS

Unit Number:	124	Planned Acres:	45.7	Silvicultural Systems:	CC, DEF	In Alternatives:	2, 3, 4
LUD:	ML	Harvest Acres:	16.4	Management Area:	K35	VCU Number:	7550
Primary Watershed Code:	E80A	Primary WAA Number:	405	Quad:	ktnb4sw	Photo:	1390-140
Number of Settings:	5	Logging System:	SL	Total Estimated Harvest Volume (MBF):	487.6		

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	45.7	Cedar:	0.0	Mixed Hem/Spr:	0.0	Nonforested:	0.0
Site Productivity Classes	Low:	0.0	Medium:	0.5	High:	45.2	Primary Aspect: NNE			
Volume Strata	Low:	0.0	Medium:	0.0	High:	45.7	Noncommercial:	0.0		
Visuals	Seen:	16.4	Not Seen:	0.0	Primary ROS Code: SPNM					
VQOs	PR:	0.0	MM:	0.0	M:	16.4	P:	0.0	R:	0.0
VAC Rating	Low:	0.0	Intermediate:	44.9	High:	0.8	Roadless: 16.4			
Mass Movement Index	Low:	0.0	Medium:	21.6	High:	24.1	Very High:	0.0	Slopes Greater Than 72%:	0.1
Wetland Type			Forested Wetland:	8.8						
TLMP High Value MARTEN Habitat	45.7									

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS: No Concerns

FISH/WATERSHED:

Class III HC6 southeast: Sideslope S&G buffer to form unit boundary
 Class II (direct) AF1 east: Greater of 140 foot or alluvial fan RMA buffer required.
 Class II MM1 east: Greater of 120 foot or RMA buffer to form unit boundary.
 Class III HC5 northwest: Sideslope S&G buffer to form unit boundary.
 Class II (direct) AF1 north: Greater of 140 foot or alluvial fan RMA buffer required.

GEOLOGY:

High landside potential in the south part of the unit. See Soils for mitigation measures.

LANDS:

No concerns.

RECREATION/VISUALS: No concerns.

SILVICULTURE:

Highly productive. Clearcut harvest 16 acres. Stand should regenerate naturally. Harvest deferred on 29.3 acres to meet Marten standards (see wildlife). CT 10/22/97

SOILS:

The south part of this unit contains about 24 acres of high landslide potential (MMI=3) soils (BMP 13.5). Almost 18 acres of MMI=3 soils have been deferred from timber harvest (BMP 13.1). The north part of the unit contains about nine acres of forested wetlands (BMP 12.5). Use a low impact logging system on these wetlands and high landslide potential areas, which minimizes ground disturbance and provides at least partial log suspension when yarding (BMP 13.9). Roads have been located in these wetlands to avoid high landslide potential slopes (BMP 14.2). Use overlay road construction and minimize side ditching on these wetlands to minimize effects upon groundwater flow (BMPs 12.5, 14.3). Avoid placing overburden or other fill material in these wetlands (BMP 14.19).

TIMBER:

Planned logging systems design for this unit is Slackline. Confirm final road and landing locations.

WILDLIFE:

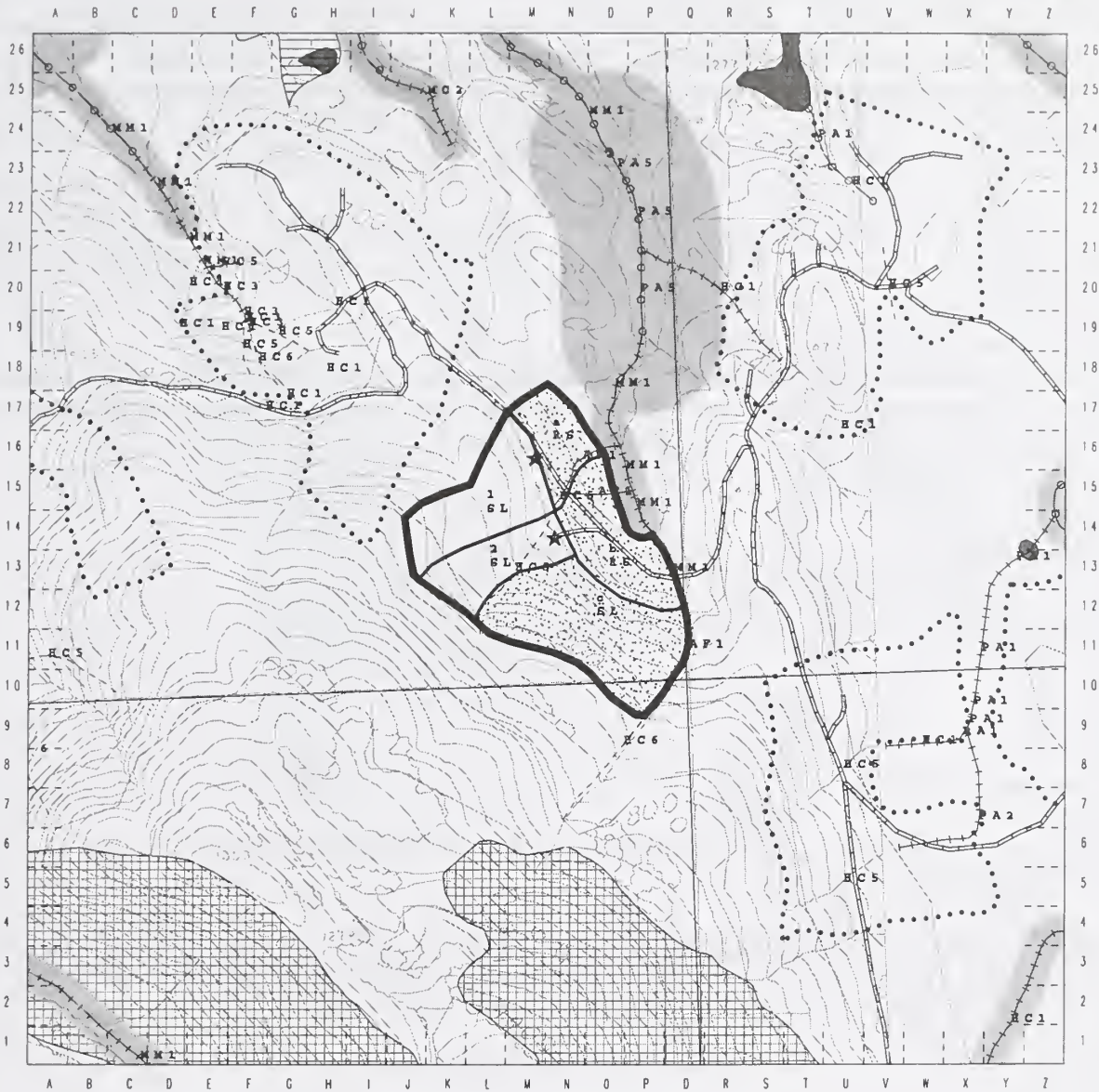
Marten guidelines apply: maintain 10-20% of canopy, average 4 large trees/acre (20-30"+), average 3 snags per acre, average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 124

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, /s:/files/set/library/gis/sealevel/draftcard/draftcard.dml



Note: Compiled from various digital geographic data. This map may not meet National Map Accuracy Standards

	Class 1 Stream		Stream, beach or Estuary buffer
	Class 2 Stream		Private Land
	Class 3 Stream		Riparian Soil Buffer
	Section Line		Body of Water
	Planning Roads		Prior Harvest
	Unit boundary		Deferred from Harvest
	Settling Line		Mass Movement Index of Soil
	Contour or Ortho line		
	Other Sealevel		

Low Volume - 0
Medium Volume - 0
High Volume - 16
Unknown Volume - 0
Total Acres - 46
Potential MBF - 573
Quarter Quod - klnb4se
VCU Number - 7550
Photo Number - 1390140
Alternative Pattern - 23400
★ Landing

LOGGING SYSTEMS Abbrev.

RS Running Skyline
HE Helicopter
HL High Lead
SL Slack Line
SH Shovel Yarding

Projection - Stateplane



Eagle Nest



Unit Data Card - Sea Level Draft EIS

Unit Number:	125	Planned Acres:	52.6	Silvicultural Systems:	CC, DEF	In Alternatives:	2, 3
LUD:	TP	Harvest Acres:	37.8	Management Area:	K35	VCU Number:	7550
Primary Watershed Code:	E79A	Primary WAA Number:	405	Quad:	ktnb4se	Photo:	1390-160
Number of Settings:	19	Logging System:	RS	Total Estimated Harvest Volume (MBF):	1,081.2		

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	52.6	Cedar:	0.0	Mixed Hem/Spr:	0.0	Nonforested:	0.0
Site Productivity Classes	Low:	0.0	Medium:	8.1	High:	44.5	Primary Aspect: ENE			
Volume Strata	Low:	0.0	Medium:	12.8	High:	39.8	Noncommercial:	0.0	Primary ROS Code: SPNM	
Visuals	Seen:	0.0	Not Seen:	37.8						
VQOs	PR:	0.0	MM:	37.8	M:	0.0	P:	0.0	R:	0.0
VAC Rating	Low:	0.0	Intermediate:	0.0	High:	52.6	Roadless: 37.8			
Mass Movement Index	Low:	0.0	Medium:	46.0	High:	6.6	Very High:	0.0	Slopes Greater Than 72%:	0.1
Wetland Type	Forested Wetland:		12.7							
TLMP High Value Marten Habitat	38.1									

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS: No Concerns

FISH/WATERSHED:

Class II (direct) HCl southwest: Greater of 100 foot or RMA (top of V-notch) buffer required.
 Class III HC5 southeast: Sideslope S&G buffer (top of V-notch), split yard or full suspension required.
 Class I PA I northwest: Greater of 100 foot or RMA buffer required.
 Class I (adfluvial) HCl center to northwest: Greater of 100 foot or RMA (top of V-notch) buffer required.

GEOLOGY:

No concerns.

LANDS:

No concerns.

RECREATION/VISUALS: No Concerns

SILVICULTURE:

Highly productive. Clearcut harvest 38 acres. Plant 5 acres of AYC the remainder of the stand should regenerate naturally. Harvest deferred on 14 acres to meet Marten standards (see wildlife). CT 10/22/97

SOILS:

The south side of this unit contains forested wetlands (BMP 12.5). Recommend that a low impact yarding system, which provides at least partial log suspension be used when yarding (BMP 13.9) on wetlands and high landslide potential soils. Avoid locating roads and log landings in these wetlands (BMP 14.2), if possible. These wetlands should not be used for the disposal of waste material or logging slash (BMP 14.19). This unit contains 6.6 acres of high landslide potential (MMI=3) soils (BMP 13.5). 4.6 acres of these MMI=3 soils have been deferred from timber harvest (BMP 13.1).

TIMBER:

Planned logging systems design for this unit is Running Skyline. Confirm final road and landing locations.

WILDLIFE:

Maintain small Old-growth Habitat Reserve along north boundary of unit.
 Marten guidelines apply: maintain 10-20% of canopy, average 4 large trees/acre (20-30"+), average 3 snags per acre, average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 125

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, //s://files/csl/library/gis/scalex5/draftcard/draftcard.mxd



Note: Compiled from various digital geographic data. This map may not meet National Map Accuracy Standards.

- | | | | |
|--|-----------------------|--|---------------------------------|
| | Class 1 Stream | | Stream, Beach or Estuary Buffer |
| | Class 2 Stream | | Private Land |
| | Class 3 Stream | | Riparian Soil Buffer |
| | Section Line | | Body of Water |
| | Planning Roads | | Prior Harvest |
| | Unit Boundary | | Deferred from Harvest |
| | Setting Line | | Mass Movement Index 4 Soil |
| | Contour or Ortho Line | | |
| | Other Sealevel | | |

Low Volume - 0
 Medium Volume - 9
 High Volume - 29
 Unknown Volume - 0
 Total Acres - 53
 Potential MBI - 1243
 Quarter Quad - knobise
 VCU Number - 7550
 Photo Number - 1390160
 Alternative Pattern - 23000
 * Leading

LOGGING SYSTEMS Abbrev

RS Running Skyline
 HE Helicopter
 HL High Lead
 SL Slack Line
 SH Shovel Yarding

Projection - Stateplane



Eagle Nest

Feet

0 526 1056 1582 2112

Unit Data Card - Sea Level Draft EIS

Unit Number:	126	Planned Acres:	44.4	Silvicultural Systems:	CC, DEF	In Alternatives:	2, 3
LUD:	TP	Harvest Acres:	37.2	Management Area:	K35	VCU Number:	7550
Primary Watershed Code:	E79A	Primary WAA Number:	405	Quad:	ktnb4se	Photo:	1390-160
Number of Settings:	8	Logging System:	RS	Total Estimated Harvest Volume (MBF):		922.0	

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	44.4	Cedar:	0.0	Mixed Hem/Spr:	0.0	Nonforested:	0.0	
Site Productivity Classes	Low:	10.9	Medium:	27.0	High:	6.5	Primary Aspect:				E
Volume Strata	Low:	10.9	Medium:	33.5	High:	0.0	Noncommercial:	0.0	Primary ROS Code: SPNM		
Visuals	Seen:	0.0	Not Seen:	37.2							
VQOs	PR:	0.0	MM:	37.2	M:	0.0	P:	0.0	R:		0.0
VAC Rating	Low:	0.0	Intermediate:	0.0	High:	44.4	Roadless:				37.2
Mass Movement Index	Low:	0.0	Medium:	0.0	High:	44.4	Very High:	0.0	Slopes Greater Than 72%:		0.0
Wetland Type	Short Sedge Meadow:		0.6		Forested Wetland:		9.2				
TLMP High Value Marten Habitat	0.0										

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS: no concerns

FISH/WATERSHED:

Class IV HC5 center to east: Split yard or partial suspension required.

Class II (non-direct) HC1 center to east: Greater of 100 foot or RMA (top of V-notch) buffer required, to form unit boundary.

Class IV HC5 south to east: Split yard or partial suspension required.

Class II (non-direct) PA2 center to southeast: S&G buffer required.

GEOLOGY:

No concerns.

LANDS:

No concerns.

RECREATION/VISUALS: No Concerns

SILVICULTURE:

Moderately productive. Clearcut harvest 37 acres. Stand should regenerate naturally. Harvest deferred on 8 acres for organic soil concerns. Stand has Sensitive Plant concerns specifically Platenthera Corisiana, unit boundary was adjusted to account for all 3 populations, see resource report. Monitoring for regeneration of Pacific Silver Fir. CT 10/22/97

SOILS:

Most of this unit consists of high landslide potential (MMI=3) soils (BMP 13.5). 7.2 acres of the MMI=3 soils have been included in deferral areas (BMP 13.1). The north part of the unit contains about nine acres of forested wetlands (BMP 12.5). Use a low impact logging system on these wetlands and MMI=3 soils to minimize ground disturbance and provide at least partial log suspension when yarding (BMP 13.9). Road construction on steep, potentially unstable slopes may require full-bench design (BMP 14.7). Limit blasting for road construction and rock pit development when the soil is saturated (BMP 14.6). Use overlay road construction and minimize side ditching, where practicable, on wetlands, to minimize the effects upon groundwater flow (BMP 14.3). Avoid the use of these wetlands for the disposal of waste material or logging slash (BMP 14.19).

TIMBER:

Planned logging systems design for this unit is Running Skyline. Confirm final road and landing locations.

WILDLIFE:

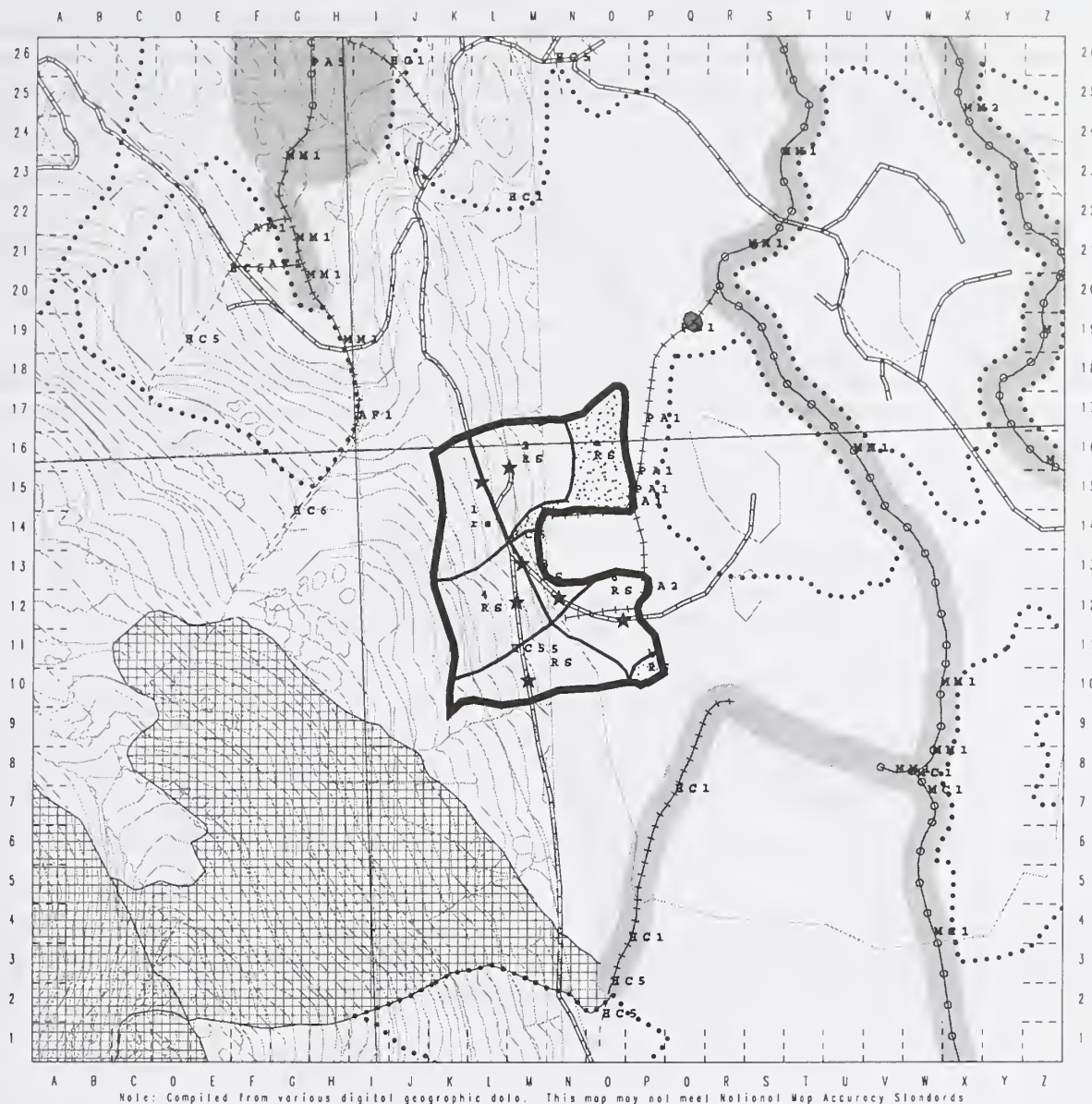
No wildlife mitigation anticipated for this unit.

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 126

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, /f:/files/rel/library/gis/sealevel/draftcard/draftcard.mxd



<ul style="list-style-type: none"> Class 1 Stream Class 2 Stream Class 3 Stream Section Line Planning Roads Unit Boundary Setting Line Contour or Ortho line Other Sealevel 	<ul style="list-style-type: none"> Stream, Beach or Estuary Buffer Private Land Riparian Eoil Buffer Body of Water Prior Harvest Deferred from Harvest Mass Movement Index 4 Coll 	<ul style="list-style-type: none"> Low Volume - 5 Medium Volume - 33 High Volume - 0 Unknown Volume - 0 Total Acres - 44 Potential MBF - 928 Quarter Quad - klabisc VCU Number - 7550 Photo Number - 1390160 Alternative Pattern - 23000 * Landing
--	--	---

LOGGING SYSTEMS Abbrev.

RS Running Skyline
 HE Helicopter
 HL High Lead
 SL Stock Line
 SH Shovel Yarding

Projection - Stateplane

Eagle Nest

Feet

0 526 1056 1582 2112

Unit Data Card - Sea Level Draft EIS

Unit Number:	127	Planned Acres:	67.1	Silvicultural Systems:	CC, DEF	In Alternative:	2
LUD:	TP	Harvest Acres:	42.4	Quad:	ktnb4se	Photo:	1390-160
Primary Watershed Code:	E79A	Primary WAA Number:	405	Management Area:	K35	VCU Number:	7550
Number of Settings:	14	Logging Systems:	RS, SH	Total Estimated Harvest Volume (MBF):	1,139.4		

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	67.1	Cedar:	0.0	Mixed Hem/Spr:	00.0	Nonforested:		0.0
Site Productivity Classes	Low:	2.9	Medium:	37.0	High:	27.3	Primary Aspect:				
Volume Strata	Low:	2.9	Medium:	33.1	High:	31.2	Noncommercial:	0.0			
Visuals	Seen:	0.0	Not Seen:	42.4	Primary ROS Code:					RM	
VQOs	PR:	0.0	MM:	42.4	M:	0.0	P:	0.0	R:	0.0	
VAC Rating	Low:	0.0	Intermediate:	0.0	High:	67.1	Roadless:				0.0
Mass Movement Index	Low:	0.0	Medium:	64.0	High:	3.1	Very High:	0.0	Slopes Greater Than 72%:		0.0
Wetland Type	Short Sedge Meadow:		0.2	Forested Wetland:		40.7	Tall Sedge Fen:		0.2		
TLMP High Value Marten Habitat		25.5									

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS: No Concerns

FISH/WATERSHED:

Class II (direct) MM2 east: Greater of 120 foot or RMA buffer required.

Class II (direct) MM1 west: Greater of 120 foot or RMA buffer required.

Class II (direct) HC2 center to northwest: Greater of 100 foot or RMA (top of V-notch) buffer required.

Class II (direct) HC2 center to southeast: Greater of 100 foot or RMA (top of V-notch) buffer required.

GEOLOGY:

High landslide potential areas. See Soils for mitigation measures.

LANDS:

No concerns.

RECREATION/VISUALS: No Concerns

SILVICULTURE:

Moderately productive. Clearcut harvest 42 acres. Stand should regenerate naturally. Harvest deferred on 25 acres to meet Marten standards (see wildlife). CT 10/22/97

SOILS:

This unit contains about three acres of high landslide potential soils along it's eastern edge (BMP 13.5). Much of the western side of the unit consists of forested wetlands (BMP 12.5). Use a low impact logging system on these wetlands and high landslide potential soils which minimizes ground disturbance and provides at least partial log suspension when yarding (BMP 13.9). Roads have been located to avoid high landslide potential areas (BMPs 14.2, 14.7). Use overlay road construction and minimize side ditching on wetlands, where practicable, to minimize the effects upon groundwater flow (BMP 14.3).

TIMBER:

Planned logging systems design for this unit is Running Skyline and Shovel. Confirm final road and landing locations

WILDLIFE:

Marten guidelines apply: maintain 10-20% of canopy, average 4 large trees/acre (20-30"+), average 3 snags per acre, average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 127

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, //files/rel/library/gis/sealevel/draftcard/draftcard.mxd



<ul style="list-style-type: none"> Class 1 Stream Class 2 Stream Class 3 Stream Section Line Planning Road Unit Boundary Setting Line Contour or Ortho line Other Sealevel 	<ul style="list-style-type: none"> Stream, Beach or Estuary Buffer Private Land Riparian Soil Buffer Body of Water Prior Harvest Deferred from Harvest Mass Movement Index 4 Soil 	<ul style="list-style-type: none"> Low Volume - 2 Medium Volume - 23 High Volume - 17 Unknown Volume - 0 Total Acres - 67 Potential MBF - 1241 Quotient Quod - klnb4se VCU Number - 7550 Photo Number - 1390160 Alternative Pattern - 20000 * Lending
---	--	--

LOGGING SYSTEMS Abbrev.

RS Running Skyline
HE Helicopter
HL High Lead
SL Slack Line
SH Shovel Yarding

Projection - Stateplane

Eagle Nest

Feet
0 526 1056 1582 2112

Unit Data Card - Sea Level Draft EIS

Unit Number:	128	Planned Acres:	86.1	Silvicultural Systems:	CC, DEF	In Alternative:	2
LUD:	TP	Harvest Acres:	68.4	Quad:	ktnb4se	Photo:	1390-160
Primary Watershed Code:	E79A	Primary WAA Number:	405	Management Area:	K35	VCU Number:	7550
Number of Settings:	13	Logging Systems:	LS, RS, SH	Total Estimated Harvest Volume (MBF):	2,025.3		

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	83.7	Cedar:	2.4	Mixed Hem/Spr:	0.0	Nonforested:	0.0	
Site Productivity Classes	Low:	0.0	Medium:	84.2	High:	2.0	Primary Aspect:			W	
Volume Strata	Low:	0.0	Medium:	3.6	High:	82.5	Noncommercial:	0.0	Primary ROS Code:		SPNM
Visuals	Seen:	32.9	Not Seen:	35.5							
VQOs	PR:	0.0	MM:	68.4	M:	0.0	P:	0.0	R:	0.0	
VAC Rating	Low:	0.0	Intermediate:	52.3	High:	33.9	Roadless:			68.4	
Mass Movement Index	Low:	0.0	Medium:	18.6	High:	67.5	Very High:	0.0	Slopes Greater Than 72%:	0.0	
Wetland Type											
TLMP High Value Marten Habitat	82.1										

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS: No Concerns

FISH/WATERSHED:

Class III HC5 center to west: Sideslope S&G buffer (top of V-notch), split yard or full suspension required.

Class III HC5 south to north: Sideslope S&G buffer (top of V-notch), split yard or full suspension required.

Class III HC5 east to west: Sideslope S&G buffer (top of V-notch), split yard or full suspension required.

Class II (direct) MM2 west: Consider a 300 foot buffer, greater of 120 foot or RMA buffer required.

Class III HC6 center to northwest: Sideslope S&G buffer (top of V-notch), split yard or full suspension required

GEOLOGY:

High landslide potential. See Soils for mitigation measures.

LANDS:

No concerns.

RECREATION/VISUALS: No Concerns

SILVICULTURE:

Moderately productive. Clearcut harvest 68.1 acres. Stand should regenerate naturally. Harvest deferred on 18 acres to meet Marten standards (see wildlife). CT 10/22/97

SOILS:

Unit consists of high landslide potential (MMI=3) soils (BMP 13.5). 9.3 acres of the MMI=3 soils have been included in deferral areas (BMP 13.1). Use a low impact logging system on MMI=3 soils which minimizes ground disturbance and provides at least partial log suspension when yarding (BMP 13.9). Road construction may require full-bench design on steep, potentially unstable slopes (BMP 14.7). Limit blasting for road construction and rock pit development when the soil is saturated (BMPs 14.6, 14.18).

TIMBER:

Planned logging systems design for this unit is Running Skyline, Live Skyline, and Shovel. Confirm final road and landing locations.

WILDLIFE:

Maintain Old-growth Habitat Reserve along north boundary of unit.

Marten guidelines apply: maintain 10-20% of canopy, average 4 large trees/acre (20-30"+), average 3 snags per acre, average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 128

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, /isl/usa/rel/library/gis/sealevel/draftcard4/draftcard.ami



Note: Compiled from various digital geographic data. This map may not meet National Map Accuracy Standards

	Class 1 Stream		Stream, beach or Estuary Buffer
	Class 2 Stream		Private Land
	Class 3 Stream		Riparian Soil Buffer
	Section Line		Body of Water
	Planning Road		Prior Harvest
	Unit Boundary		Deferred from Harvest
	Setting Line		Mass Movement Index 4 Soil
	Contour or Ortho line		
	Other Sealevel		

Low Volume - 0
 Medium Volume - 2
 High Volume - 66
 Unknown Volume - 0
 Total Acres - 86
 Potential MBF - 2372
 Quarter Quad - knobase
 VCU Number - 7550
 Photo Number - 1390160
 Alternative Pattern - 20000
 * Landing

LOGGING SYSTEMS Abbrev.

RS Running Skyline
 HE Helicopter
 HL High Lead
 SL Stock Line
 SH Shovel Yarding

Projection - Stolephone



Eagle Nest



Unit Data Card - Sea Level Draft EIS

Unit Number:	133	Planned Acres:	37.5	Silvicultural Systems:	CC, DEF	In Alternatives:	2, 3
LUD:	TP	Harvest Acres:	21.4	Management Area:	K35	VCU Number:	7550
Primary Watershed Code:	E79A	Primary WAA Number:	405	Quad:	ktnb4sw	Photo:	1390-160
Number of Settings:	7	Logging Systems:	RS, SL	Total Estimated Harvest Volume (MBF):	585.6		

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	37.5	Cedar:	0.0	Mixed Hcm/Spr:	0.0	Nonforested:	0.0	
Site Productivity Classes	Low:	0.1	Medium:	37.4	High:	0.0	Primary Aspect:				E
Volume Strata	Low:	0.0	Medium:	14.5	High:	0.0	Noncommercial:	0.0			
Visuals	Seen:	0.0	Not Seen:	21.4	Primary ROS Code: SPNM						
VQOs	PR:	0.0	MM:	21.4	M:	0.0	P:	0.0	R:	0.0	
VAC Rating	Low:	0.0	Intermediate:	0.0	High:	37.5	Roadless:				21.4
Mass Movement Index	Low:	37.4	Medium:	0.0	High:	0.1	Very High:	0.0	Slopes Greater Than 72%:	0.5	
Wetland Type	Short Sedge Meadow:		0.3	Forested Wetland:		6.4					
TLMP High Value Marten Habitat	18.0										

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS: No Concerns

FISH/WATERSHED:

HC5 III center to north: Sideslope S&G buffer, split yard or full suspension required.

GEOLOGY:

No concerns.

LANDS:

No concerns.

RECREATION/VISUALS: No Concerns

SILVICULTURE:

Highly productive. Clearcut and patch cut harvest 21 acres. Plant 3 acres with AYC the remainder of the stand should regenerate naturally. Harvest deferred on 16 acres to meet Marten standards (see wildlife). This stand has Sensitive Plant concerns outside of the boundary where field crews have been accessing the unit from the helispot to the west, please avoid if possible, the plant is *Listera convallarioides*, see resource report. Monitor regeneration of Pacific Silver Fir. CT 10/22/97

SOILS:

The upper part of this unit contains about six acres of forested wetland (BMP 12.5). The planned access road has been located to avoid these wetlands (BMPs 14.1, 14.2). About a half acre of this unit consist of slopes greater than 72%.. This slope has been placed in a deferral area.

TIMBER:

Planned logging systems design for this unit is Running Skyline and Slackline. Confirm final road and landing locations. Verify feasibility of split yarding or full suspension of Class III streams within unit and adjust roads, landings, or modify unit boundary if required.

WILDLIFE:

Marten guidelines apply: maintain 10-20% of canopy, average 4 large trees/acre (20-30"+), average 3 snags per acre, average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

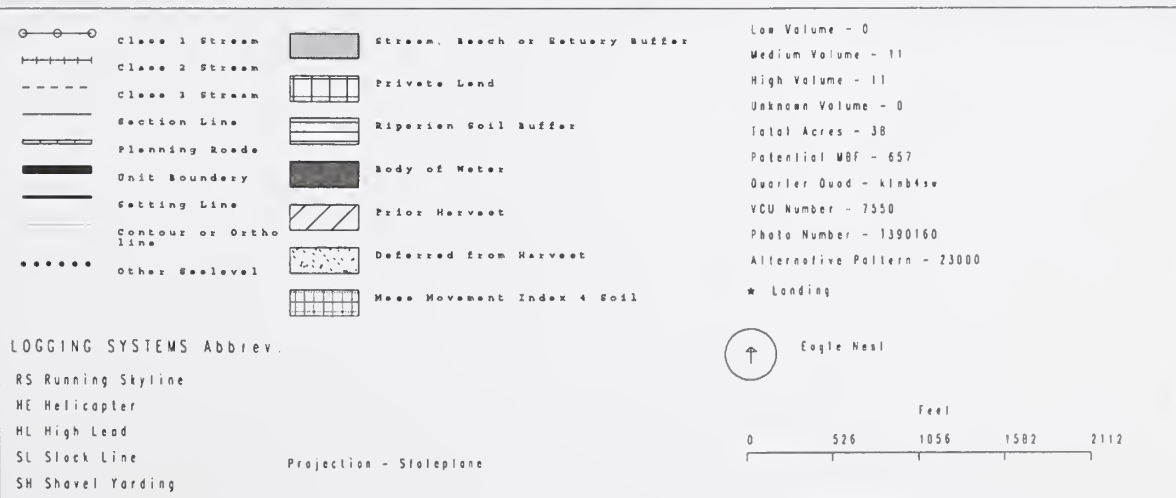
Sealevel Study Area Unit Schematic - Draft Unit 133

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, J:\files\ref\library\gis\sealevel\draftcard\draftcard.mxd



Note: Compiled from various digital geographic data. This map may not meet National Map Accuracy Standards



Unit Data Card - Sea Level Draft EIS

Unit Number:	134	Planned Acres:	24.4	Silvicultural Systems:	CC, DEF	In Alternatives:	2, 3
LUD:	TP	Harvest Acres:	22.2	Management Area:	K35	VCU Number:	7550
Primary Watershed Code:	E79A	Primary WAA Number:	405	Quad:	ktnb4se	Photo:	1390-161
Number of Settings:	5	Logging System:	RS	Total Estimated Harvest Volume (MBF):		551.8	

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	24.4	Cedar:	0.0	Mixed Hem/Spr:	0.0	Nonforested:	0.0
Site Productivity Classes	Low:	0.0	Medium:	24.4	High:	0.0	Primary Aspect: NE			
Volume Strata	Low:	0.0	Medium:	24.4	High:	0.0	Noncommercial:	0.0	-	
Visuals	Seen:	0.0	Not Seen:	22.2	Primary ROS Code: SPNM					
VQOs	PR:	0.0	MM:	22.2	M:	0.0	P:	0.0	R:	0.0
VAC Rating	Low:	0.0	Intermediate:	0.0	High:	24.4	Roadless: 22.2			
Mass Movement Index	Low:	24.4	Medium:	0.0	High:	0.0	Very High:	0.0	Slopes Greater Than 72%:	0.0
Wetland Type	Forested Wetland:		22.7	Scrub-Shrub Muskeg:		0.9				
TLMP High Value Marten Habitat	0.0									

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS:

No Concerns

FISH/WATERSHED:

No concerns

GEOLOGY:

No concerns.

LANDS:

No concerns.

RECREATION/VISUALS: No Concerns

SILVICULTURE:

Moderately low productivity. Clearcut harvest 22 acres. Stand should regenerate naturally. Harvest deferred on 2 acres for organic wetland concerns. This stand has sensitive plant concerns, specifically *Platanthera chorisiana*, protection of plants in this unit will be difficult and additional analysis and planning is needed, see resource report. CT 10/22/97

SOILS:

Most of this harvest unit is made up of forested wetland and scrub-shrub muskeg wetlands (BMP 12.5). Recommend the use of a low impact harvest system that will minimize ground disturbance and provide at least partial log suspension when yarding (BMP 13.9). Use overlay road construction and minimize side ditching, where practicable, to minimize the effects upon groundwater flow (BMP 14.3). Avoid the use of these wetlands for the disposal of waste material or logging slash (BMP 14.19).

TIMBER:

Planned logging systems design for this unit is Running Skyline. Confirm final road and landing locations.

WILDLIFE:

No wildlife mitigation anticipated for this unit.

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 134

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, /s:/files/ref/library/gis/sealevel/draftcard4/draftcard.dmt



Note: Compiled from various digital geographic data. This map may not meet National Map Accuracy Standards

	Class 1 Stream		Stream, Beach or Estuary Buffer
	Class 2 Stream		Private Land
	Class 3 Stream		Riparian Soil Buffer
	Section Line		Body of Water
	Planning Road		Prior Harvest
	Unit Boundary		Deferred from Harvest
	Setting Line		Mass Movement Index 4 Soil
	Contour or Ortho line		
	Other Sealevel		

Low Volume - 0
 Medium Volume - 22
 High Volume - 0
 Unknown Volume - 0
 Total Acres - 24
 Potential MBF - 583
 Quarter Quad - klabase
 VCU Number - 7550
 Photo Number - 1390161
 Alternative Pattern - 23000
 * Landing

LOGGING SYSTEMS Abbrev.

RS Running Skyline
 HE Helicopter
 HL High Lead
 SL Slack Line
 SH Shovel Yarding

Projection - Stateplane



Eagle Nest



Unit Data Card - Sea Level Draft EIS

Unit Number:	135	Planned Acres:	87.1	Silvicultural Systems:	CC, DEF	In Alternative:	2
LUD:	TP	Harvest Acres:	16.2	Quad:	ktnb4se	Photo:	1390-160
Primary Watershed Code:	E79A	Primary WAA Number:	405	Management Area:	K35	VCU Number:	7550
Number of Settings:	18	Logging Systems:	RS, SH	Total Estimated Harvest Volume (MBF):		400.7	

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	87.1	Cedar:	0.0	Mixed Hem/Spr:	0.0	Nonforested:	0.0	
Site Productivity Classes	Low:	44.9	Medium:	0.0	High:	42.2	Primary Aspect:				W
Volume Strata	Low:	44.7	Medium:	42.3	High:	0.1	Noncommercial:	0.0			
Visuals	Seen:	0.0	Not Seen:	16.2					Primary ROS Code:	SPNM	
VQOs	PR:	0.0	MM:	16.2	M:	0.0	P:	0.0	R:	0.0	
VAC Rating	Low:	0.0	Intermediate:	0.1	High:	87.0	Roadless:				16.2
Mass Movement Index	Low:	0.0	Medium:	87.1	High:	0.0	Very High:	0.0	Slopes Greater Than 72%:		0.0
Wetland Type	Forested Wetland:		63.2	Scrub-Shrub Muskeg:		2.1	Riparian Forest:		0.5		
TLMP High Value Marten Habitat	0										

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS:

No Concerns

FISH/WATERSHED:

Class 1 MM2 east: Greater of 120 foot or RMA buffer to form unit boundary.

Class 1 MM1 west: Greater of 120 foot or RMA buffer to form unit boundary.

GEOLOGY:

No concerns.

LANDS:

No concerns.

RECREATION/VISUALS:

No Concerns

SILVICULTURE:

Moderately productive. Clearcut harvest 16 acres. Plant 2 acres of AYC the remainder of the stand should regenerate naturally. Harvest deferred on 61.1 acres for organic wetland concerns. CT 10/22/97

SOILS:

This unit includes over 65 acres of forested wetlands and scrub-shrub muskeg (BMP 12.5). Running skyline and shovel logging are low impact logging systems which will minimize ground disturbance and provide at least partial log suspension on these wetlands (BMP 13.9). Construction of access roads on these wetlands is unavoidable due to there extensive distribution (BMPs 14.1, 14.2). Use over lay road construction and minimize side ditching, where practicable, to minimize the effects upon groundwater flow (BMP 14.3). Avoid the placement of waste material, logging slash or other fill on these wetlands (BMP 14.19).

TIMBER:

Planned logging systems design for this unit is Running Skyline and Shovel. Confirm final road and landing locations.

WILDLIFE:

No wildlife mitigation anticipated for this unit.

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 135

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, //s://files/rel/library/gis/sealevel/draftcard/draftcard.mxd



Note: Compiled from various digital geographic data. This map may not meet National Map Accuracy Standards

- | | | | |
|--|-----------------------|--|---------------------------------|
| | Class 1 Stream | | Stream, Beach or Estuary Buffer |
| | Class 2 Stream | | Private Land |
| | Class 3 Stream | | Riparian Soil Buffer |
| | Section Line | | Body of Water |
| | Planning Roads | | Prior Harvest |
| | Unit Boundary | | Deferred from Harvest |
| | Setting Line | | Mass Movement Index 4 Soil |
| | Contour or Ortho Line | | |
| | Other Sealevel | | |

Low Volume - 1
 Medium Volume - 15
 High Volume - 0
 Unknown Volume - 0
 Total Acres - 87
 Potential MBF - 411
 Quarter Quad - 41446
 VCU Number - 7550
 Photo Number - 1390160
 Alternative Pattern - 20000
 * Landing

LOGGING SYSTEMS Abbrev.

RS Running Skyline
 HE Helicopter
 HL High Lead
 SL Slack Line
 SH Shovel Yarding

Projection - Stateplane



Eagle Nest

Feet
 0 526 1056 1582 2112

Unit Data Card - Sea Level Draft EIS

Unit Number:	136	Planned Acres:	35.2	Silvicultural Systems:	CC, DEF	In Alternative:	2
LUD:	TP	Harvest Acres:	27.0	Quad:	ktnb4nw	Photo:	1390-161
Primary Watershed Code:	E79A	Primary WAA Number:	405	Management Area:	K35	VCU Number:	7550
Number of Settings:	14	Logging Systems:	RS, SH	Total Estimated Harvest Volume (MBF):	694.5		

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	29.1	Cedar:	0.0	Mixed Hem/Spr:	6.1	Nonforested:	0.0
Site Productivity Classes	Low:	12.0	Medium:	23.1	High:	0.0	Primary Aspect: NNE			
Volume Strata	Low:	12.0	Medium:	17.1	High:	6.1	Noncommercial:	0.0		
Visuals	Scen:	0.0	Not Scen:	27.0	Primary ROS Code: SPNM					
VQOs	PR:	0.0	MM:	27.0	M:	0.0	P:	0.0	R:	0.0
VAC Rating	Low:	0.0	Intermediate:	0.0	High:	35.2	Roadless: 27.0			
Mass Movement Index	Low:	23.1	Medium:	0.0	High:	12.0	Very High:	0.0	Slopes Greater Than 72%:	0.0
Wetland Type	Forested Wetland:			29.9	Scrub-Shrub Muskeg:			0.4		
TLMP High Value Marten Habitat	6.6									

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS: No Concerns

FISH/WATERSHED:

Class II (direct) HCl north: Greater of 100 foot or RMA (top of V-notch) buffer to form unit boundary.

GEOLOGY:

High landslide potential in the upper part of this unit. See Soils for mitigation measures.

LANDS:

No concerns.

RECREATION/VISUALS: No Concerns

SILVICULTURE:

Highly productive. Clearcut harvest 27 acres. Plant two acres of AYC the remainder of the stand should regenerate naturally. Harvest deferred on 8 acres to meet Marten standards (see wildlife). CT 10/22/97

SOILS:

The upper part of this unit contains high landslide potential (MMI=3) soils (BMP 13.5). About six acres of the MMI=3 soils have been deferred from timber harvest (BMP 13.1). Much of the unit also consists of forested wetlands (BMP 12.5). Use a low impact logging system which minimizes ground disturbance and provides at least partial log suspension when yarding (BMP 13.9). The access road has been located in the lower part of the unit to avoid high landslide potential sites (BMPs 14.1 and 14.2). Use overlay road construction on areas of wetlands and minimize side ditching, where possible, to minimize the effects upon groundwater flows (BMP 14.3).

TIMBER:

Planned logging system design for this unit is Running Skyline. Confirm final road and landing locations.

WILDLIFE:

Marten guidelines apply: maintain 10-20% of canopy, average 4 large trees/acre (20-30"+), average 3 snags per acre, average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 136

Mapscale 1:12000 (5 inch to mile)

Created 11-17-1997, //deltek/rel/1:library/gis/sealevel/draftcard/draftcard.mxd



Unit Data Card - Sea Level Draft EIS

Unit Number:	137	Planned Acres:	17.6	Silvicultural System:	CC	In Alternative:	2
LUD:	TP	Harvest Acres:	17.6	Quad:	ktnb4nw	Photo:	1390-162
Primary Watershed Code:	E79A	Primary WAA Number:	405	Management Area:	K35	VCU Number:	7550
Number of Settings:	3	Logging System:	RS	Total Estimated Harvest Volume (MBF):		435.9	

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	17.6	Cedar:	0.0	Mixed Hem/Spr:	0.0	Nonforested:	0.0
Site Productivity Classes	Low:	0.1	Medium:	17.5	High:	0.0	Primary Aspect: NE			
Volume Strata	Low:	0.1	Medium:	17.5	High:	0.0	Noncommercial:	0.0		
Visuals	Seen:	0.0	Not Seen:	17.6	Primary ROS Code: SPNM					
VQOs	PR:	0.0	MM:	17.6	M:	0.0	P:	0.0	R:	0.0
VAC Rating	Low:	0.0	Intermediate:	0.0	High:	17.6	Roadless: 17.6			
Mass Movement Index	Low:	17.5	Medium:	0.0	High:	0.1	Very High:	0.0	Slopes Greater Than 72%:	0.0
Wetland Type	Forested Wetland:		5.4	Scrub-Shrub Muskeg:		0.2				
TLMP High Value Marten Habitat	0.0									

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS: No Concerns

FISH/WATERSHED:

Class I stream to north requires a 140 foot S&G buffer.

GEOLOGY:

No concerns.

LANDS:

No concerns.

RECREATION/VISUALS: No Concerns

SILVICULTURE:

Moderate productivity. Clearcut harvest 17.6 acres. Plant 4 acres with AYC the remainder of the stand should regenerate naturally. CT 10/22/97

SOILS:

The upper part of this unit contains 5.6 acres of scrub-shrub and forested wetlands (BMP 12.5). The planned access road has been located to avoid these wetlands (BMP 14.1, 14.2). When logging these wetlands, use a low impact logging system that minimizes ground disturbance and provides at least partial log suspension when yarding (BMP 13.9).

TIMBER:

Planned logging system design for this unit is Running Skyline. Confirm final road and landing locations.

WILDLIFE:

No wildlife mitigation anticipated for this unit.

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 137

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, //files/cel/library/gis/sealevel/drollicard4/drollicard.aml



Note: Compiled from various digital geographic data. This map may not meet National Map Accuracy Standards



Unit Data Card - Sea Level Draft EIS

Unit Number:	138	Planned Acres:	34.7	Silvicultural Systems:	CC, ITM, DEF	In Alternative:	2
LUD:	TP	Harvest Acres:	26.6	Quad:	ktnb4se	Photo:	1390-162
Primary Watershed Code:	E79A	Primary WAA Number:	405	Management Area:	K35	VCU Number:	7550
Number of Settings:	5	Logging Systems:	RS, HE	Total Estimated Harvest Volume (MBF):		514.9	

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	34.7	Cedar:	0.0	Mixed Hem/Spr:	0.0	Nonforested:	0.0	
Site Productivity Classes	Low:	0.0	Medium:	34.7	High:	0.0	Primary Aspect:				N
Volume Strata	Low:	0.0	Medium:	0.0	High:	34.7	Noncommercial:	0.0			
Visuals	Seen:	0.0	Not Seen:	26.6					Primary ROS Code:	SPNM	
VQOs	PR:	0.0	MM:	26.6	M:	0.0	P:	0.0	R:	0.0	
VAC Rating	Low:	0.0	Intermediate:	0.0	High:	34.7	Roadless:				17.3
Mass Movement Index	Low:	34.7	Medium:	0.0	High:	0.0	Very High:	0.0	Slopes Greater Than 72%:	0.0	
Wetland Type	Forested Wetland:			9.0	Serub-Shrub Muskeg:			2.5			
TLMP High Value Marten Habitat	34.7										

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS:

No concerns.

FISH/WATERSHED:

No Concerns

GEOLOGY:

No concerns.

LANDS:

No concerns.

RECREATION/VISUALS:

No Concerns

SILVICULTURE:

Moderate to low productivity. Helicopter harvest 18 acres using a diameter limit prescription. Defer harvest on 8 acres to meet Marten standards (see wildlife). Patch cut 8 acres. CT 10/21/97

SOILS:

The upper part of this unit contains 2.5 acres of serub-shrub wetlands. The lower part of the unit contains nine acres of forested wetland (BMP 12.5). Use a low impact logging system on these wetlands, which minimizes ground disturbance and provides at least partial log suspension when yarding (BMP 13.9). Only a minimal amount of road construction is planned on these wetlands (BMP 14.1). On these wetlands, use overlay road construction, where practical, and minimize side ditching to minimize the effects upon groundwater flow (BMP 14.3).

TIMBER:

Planned logging systems design for this unit is Running Skyline and Helicopter. Helicopter portion of unit is Group Selection. Confirm final road and landing locations.

WILDLIFE:

Marten guidelines apply: maintain 10-20% of canopy, average 4 large trees/acre (20-30"+), average 3 snags per acre, average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 138

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, /atlanta/inf/library/gis/sealevel/draftcard/draftcard.mxd



Note: Compiled from various digital geographic data. This map may not meet National Map Accuracy Standards



Unit Data Card - Sea Level Draft EIS

Unit Number:	139	Planned Acres:	34.4	Silvicultural System:	CC	In Alternative:	2
LUD:	TP	Harvest Acres:	34.4	Quad:	ktnb4nw	Photo:	1390-176
Primary Watershed Code:	E79A	Primary WAA Number:	405	Management Area:	K35	VCU Number:	7550
Number of Settings:	3	Logging Systems:	SH, SL	Total Estimated Harvest Volume (MBF):	854.5		

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	34.4	Cedar:	0.0	Mixed Hem/Spr:	0.0	Nonforested:	0.0	
Site Productivity Classes	Low:	1.3	Medium:	0.0	High:	33.1	Primary Aspect:				
Volume Strata	Low:	1.3	Medium:	32.9	High:	0.2	Noncommercial:	0.0			
Visuals	Seen:	0.0	Not Seen:	34.4					Primary ROS Code:	RM	
VQOs	PR:	0.0	MM:	34.4	M:	0.0	P:	0.0	R:	0.0	
VAC Rating	Low:	0.0	Intermediate:	0.0	High:	34.4	Roadless:				0.0
Mass Movement Index	Low:	0.0	Medium:	34.4	High:	0.0	Very High:	0.0	Slopes Greater Than 72%:	0.0	
Wetland Type			Forested Wetland:	28.3			Scrub-Shrub Muskeg:	0.1			
TLMP High Value Marten Habitat	0.0										

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS: No Concerns

FISH/WATERSHED: No Concerns

GEOLOGY:

No concerns.

LANDS:

Harvest unit is located along the boundary of the Misty Fjords National Monument. A boundary area survey will be required before layout.

RECREATION/VISUALS: No Concerns

SILVICULTURE:

Highly productive. Clearcut harvest 34.4 acres. Plant 4 acres with AYC the remainder of the stand should regenerate naturally. CT 10/22/97

SOILS:

Unit contains over 28 acres of forested wetlands (BMP 12.5). Use a low impact logging system on these wetlands, which minimizes ground disturbance and provides at least partial log suspension when yarding (BMP 13.9). Access roads have been located to avoid these wetlands, to the extent practicable (BMP 14.2). Where road construction on wetlands is necessary, use overlay construction and minimize side ditching, to minimize the effects upon groundwater flow (BMP 14.3). Avoid the use of these wetlands for the disposal of waste material, logging slash, or other fill (BMP 14.19).

TIMBER:

Planned logging systems design for this unit is Slackline. Confirm final road and landing locations.

WILDLIFE:

No wildlife mitigation anticipated for this unit.

Unit Data Card - Sea Level Draft EIS

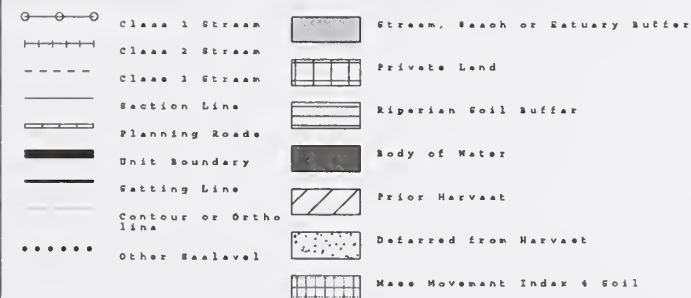
Sealevel Study Area Unit Schematic - Draft Unit 139

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, /s:/files/cnl/library/gis/sealevel/draftcard/draftcard.mxd



Note: Compiled from various digital geographic data. This map may not meet National Map Accuracy Standards



Low Volume - 1
 Medium Volume - 33
 High Volume - 0
 Unknown Volume - 0
 Total Acres - 34
 Potential MBF - 890
 Quarter Quad - K1414
 VCU Number - 7550
 Photo Number - 1390176
 Alternative Pattern - 20000
 * Landing

LOGGING SYSTEMS Abbrev.

RS Running Skyline
 HE Helicopter
 HL High Lead
 SL Slack Line
 SH Shovel Yarding

Projection - Stateplane



Eagle Nest



Unit Data Card - Sea Level Draft EIS

Unit Number:	140	Planned Acres:	79.4	Silvicultural Systems:	CC, ITM, DEF	In Alternative:	2
LUD:	TP	Harvest Acres:	56.5	Quad:	ktnb4se	Photo:	1390-175
Primary Watershed Code:	E79A	Primary WAA Number:	405	Management Area:	K35	VCU Number:	7550
Number of Settings:	17	Logging Systems:	RS, HE	Total Estimated Harvest Volume (MBF):		1,273.0	

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	79.4	Cedar:	0.0	Mixed Hem/Spr:	0.0	Nonforested:	0.0	
Site Productivity Classes	Low:	0.2	Medium:	64.6	High:	14.7	Primary Aspect:				N
Volume Strata	Low:	7.9	Medium:	20.7	High:	50.9	Noncommercial:	0.0			
Visuals	Scen:	0.0	Not Seen:	56.5					Primary ROS Code:	SPNM	
VQOs	PR:	0.0	MM:	56.5	M:	0.0	P:	0.0	R:	0.0	
VAC Rating	Low:	0.0	Intermediate:	0.0	High:	79.4	Roadless:				45.7
Mass Movement Index	Low:	64.8	Medium:	0.0	High:	14.7	Very High:	0.0	Slopes Greater Than 72%:	0.0	
Wetland Type	Short Sedge Meadow:		0.1	Forested Wetland/Scrub-Shrub Muskeg:		46.5	Tall Sedge Fen:		0.1		
TLMP High Value Marten Habitat	74.4										

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS:

No Concerns

FISH/WATERSHED:

Class II (direct) MM1 southeast: Greater of 120 foot or RMA buffer to form unit boundary.

Class II (direct) FP3 west to northwest: Greater of 100 foot or RMA buffer to form unit boundary.

GEOLOGY:

High landslide potential. See Soils for mitigation measures.

LANDS:

No concerns.

RECREATION/VISUALS: No Concerns

SILVICULTURE:

Clearcut harvest 44.4 acres. Helicopter harvest 13 acres using a diameter limit prescription. Defer harvest on 22 acres to meet Marten standards (see wildlife). CT 10/21/97

SOILS:

This harvest unit contains 14.7 acres of high landslide potential soils (MM1=3) (BMP 13.5). All of these steep, potentially unstable slopes have been placed in deferral areas (BMP 13.1). Forested wetlands and scrub-shrub muskeg make up a large part (46.5 acres) of this harvest unit (BMP 12.5). Use a low impact logging system on these wetlands, which minimizes ground disturbance and provides at least partial log suspension when yarding (BMP 13.9). Road construction on these wetlands should use overlay design and minimize side ditching where possible (BMP 14.3).

TIMBER:

Planned logging systems design for this unit is Running Skyline and Helicopter. Helicopter portion is group selection. Confirm final road and landing locations.

WILDLIFE:

Marten guidelines apply: maintain 10-20% of canopy, average 4 large trees/acre (20-30"+), average 3 snags per acre, average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 140

Mapscale 1:12000 (5 inch to mile)

Created 11-17-1997, /s:\files\ref\library\gis\sealevel\draftcard\draftcard.mxd



A B C D E F G H I J K L M N O P Q R S T U V W X Y Z



Note: Compiled from various digital geographic data. This map may not meet National Map Accuracy Standards

	Class 1 Stream		Stream, Beach or Estuary Buffer
	Class 2 Stream		Private Land
	Class 3 Stream		Riparian Soil Buffer
	Section Line		Body of Water
	Planning Road		Prior Harvest
	Unit Boundary		Deferred from Harvest
	Fatting Line		Mass Movement Index 4 Soil
	Contour or Ortho Line		
	Other Sealevel		

Low Volume - 0
 Medium Volume - 5
 High Volume - 38
 Unknown Volume - 0
 Total Acres - 79
 Potential MRF - 1476
 Overlapper Quad - 446456
 VCU Number - 7550
 Photo Number - 1390175
 Alternative Pattern - 20000
 * Landing

LOGGING SYSTEMS Abbrev.

RS Running Skyline
 HE Helicopter
 HL High Lead
 SL Slack Line
 SH Shovel Yarding

Projection - Stateplane



Eagle Nest



Unit Data Card - Sea Level Draft EIS

Unit Number:	141	Planned Acres:	63.8	Silvicultural Systems:	CC, DEF	In Alternatives:	2, 3, 4
LUD:	TP	Harvest Acres:	45.7	Management Area:	K35	VCU Number:	7570
Primary Watershed Code:	FA4A	Primary WAA Number:	405	Quad:	ktnb4sw	Photo:	1390-118
Number of Settings:	12	Logging Systems:	RS, SL	Total Estimated Harvest Volume (MBF):	494.8		

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	55.5	Cedar:	0.0	Mixed Hem/Spr:	8.3	Nonforested:	0.0
Site Productivity Classes	Low:	0.0	Medium:	63.8	High:	0.0	Primary Aspect: WSW			
Volume Strata	Low:	0.0	Medium:	0.0	High:	63.8	Noncommercial:	0.0		
Visuals	Seen:	41.7	Not Seen:	4.0	Primary ROS Code: RM					
VQOs	PR:	0.0	MM:	7.3	M:	38.4	P:	0.0	R:	0.0
VAC Rating	Low:	48.2	Intermediate:	15.7	High:	0.0	Roadless: 0.0			
Mass Movement Index	Low:	0.0	Medium:	41.7	High:	22.1	Very High:	0.0	Slopes Greater Than 72%:	5.6
Wetland Type	Forested Wetland:		12.7							
TLMP High Value Marten Habitat	63.8									

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS: No Concerns

FISH/WATERSHED:

Class II (direct) HC2 south: Greater of 100 foot or RMA (top of V-notch) buffer required.

GEOLOGY:

High landslide potential in the north part of this harvest unit. See Soils for mitigation measures. Area of low karst vulnerability. No karst features have been identified within this unit. The potential to find significant karst resources in this unit is considered to be low.

LANDS:

No concerns.

RECREATION/VISUALS: No Concerns

SILVICULTURE:

Moderately productive. Clearcut harvest 46 acres. Stand should regenerate naturally. Harvest deferred on 18 acres to meet Marten standards (see wildlife). CT 10/22/97

SOILS:

Unit has about twenty-two acres of high landslide potential soils in the northern part (BMP 13.5). Almost 13 acres of these soils have been deferred from timber harvest (BMP 13.1). The unit contains almost 13 acres of forested wetlands (BMP 12.5). Use a low impact logging system on these wetlands and high landslide potential areas, which minimizes ground disturbance and provides at least partial log suspension when yarding (BMP 13.9). Access roads have been located to avoid these wetlands and high landslide potential areas (BMPs 14.1, 14.2). This unit contains 5.6 acres of slopes greater than 72%. 3.5 acres were placed in a deferral area (BMP 13.5). The rest of these slopes were evaluated by the IDT soil scientist determined that the risk of potential impacts of accelerated erosion on downslope and downstream fish habitat, other beneficial uses of water and other resources was minimal and these slopes are included within the timber harvest unit (BMP 13.2).

TIMBER:

Planned logging systems design for this unit is Slackline and Running Skyline. Confirm final road and landing locations.

WILDLIFE:

Maintain 1000 foot beach buffer.

Marten guidelines apply: maintain 10-20% of canopy, average 4 large trees/acre (20-30"+), average 3 snags per acre, average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 141

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, //s:/files/csl/library/gis/sealevel/draftcard/draftcard.mxd



A B C D E F G H I J K L M N O P Q R S T U V W X Y Z



Note: Compiled from various digital geographic data. This map may not meet National Map Accuracy Standards

	Class 1 Stream		Stream, Beach or Estuary Buffer
	Class 2 Stream		Private Land
	Class 3 Stream		Riparian Soil Buffer
	Section Line		Body of Water
	Planning Roads		Prior Harvest
	Unit Boundary		Deferred from Harvest
	Setting Line		Mass Movement Index 4 Soil
	Contour or Ortho line		
	Other Sea level		

Low Volume - 0
Medium Volume - 0
High Volume - 46
Unknown Volume - 0
Total Acres - 64
Potential WBF - 1600
Quarter Quad - Klabits
VCU Number - 7570
Photo Number - 1390118
Alternative Pattern - 23400
★ Landing

LOGGING SYSTEMS Abbrev

RS Running Skyline
HE Helicopter
HL High Lead
SL Slack Line
SH Shovel Yarding

Projection - Stateplane



Eagle Nest



Unit Data Card - Sea Level Draft EIS

Unit Number:	143	Planned Acres:	87.6	Silvicultural Systems:	CC, DEF	In Alternatives:	2, 3, 4
LUD:	TP	Harvest Acres:	53.4	Management Area:	K35	VCU Number:	7570
Primary Watershed Code:	E85A	Primary WAA Number:	405	Quad:	ktnb4sw	Photo:	1390-135
Number of Settings:	15	Logging System:	RS	Total Estimated Harvest Volume (MBF):	1,542.0		

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	87.6	Cedar:	0.0	Mixed Hem/Spr:	0.0	Nonforested:	0.0	
Site Productivity Classes	Low:	1.7	Medium:	85.9	High:	0.0	Primary Aspect:				S
Volume Strata	Low:	1.8	Medium:	18.6	High:	67.3	Noncommercial:	0.0			
Visuals	Seen:	37.8	Not Seen:	15.6	Primary ROS Code:						RM
VQOs	PR:	0.0	MM:	53.4	M:	0.0	P:	0.0	R:	0.0	
VAC Rating	Low:	0.0	Intermediate:	55.7	High:	31.9	Roadless:				53.4
Mass Movement Index	Low:	0.0	Medium:	6.0	High:	81.5	Very High:	0.0	Slopes Greater Than 72%:	9.8	
Wetland Type	Forested Wetland:			31.5							
TLMP High Value Marten Habitat	66.6										

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS: No Concerns

FISH/WATERSHED:

Class I and Class II (direct) MC2: Greater of 100 foot or RMA (top of sideslope) buffer.

GEOLOGY:

No concerns.

LANDS:

No concerns.

RECREATION/VISUALS: No Concerns

SILVICULTURE:

Moderately productive. Clearcut harvest 53 acres. Stand should regenerate naturally. Harvest deferred on 35 acres to meet Marten standards (see wildlife). CT 10/22/97

SOILS:

This unit contains 9.8 acres of slopes greater than 72%. 6.1 acres of these steep slopes were placed in deferral areas (BMP 13.5). An on-site analysis of these slopes by the IDT soil scientist determined that the risk of potential impacts of accelerated erosion on downslope and downstream fish habitat, other beneficial uses of water and other resources was minimal and these slopes are included within the timber harvest unit (BMP 13.2).

TIMBER:

Planned logging systems design for this unit is Running Skyline. Confirm final road and landing locations.

WILDLIFE:

Marten guidelines apply: maintain 10-20% of canopy, average 4 large trees/acre (20-30"+), average 3 snags per acre, average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 143

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, J:\stiles\ref\library\gis\sealevel\draftcard\draftcard.mxd



A B C D E F G H I J K L M N O P Q R S T U V W X Y Z



Note: Compiled from various digital geographic data. This map may not meet National Map Accuracy Standards.

- | | | | |
|--|-----------------------|--|---------------------------------|
| | Class 1 Stream | | Stream, Beach or Estuary Buffer |
| | Class 2 Stream | | Private Land |
| | Class 3 Stream | | Riparian Soil Buffer |
| | Section Line | | Body of Water |
| | Planning Road | | Prior Harvest |
| | Unit Boundary | | Deferred from Harvest |
| | Setting Line | | Mass Movement Index 4 Soil |
| | Contour or Ortho line | | |
| | Other Sealevel | | |

Low Volume - 0
 Medium Volume - 10
 High Volume - 44
 Unknown Volume - 0
 Total Acres - 88
 Potential WBF - 1782
 Quarter Quad - 141456
 VCU Number - 7570
 Photo Number - 1390135
 Alternative Pattern - 23400
 * Landing

LOGGING SYSTEMS Abbrev.

R5 Running Skyline
 HE Helicopter
 HL High Lead
 SL Stock Line
 SH Shovel Yarding

Projection - Stateplane



Eagle Nest



Unit Data Card - Sea Level Draft EIS

Unit Number:	145	Planned Acres:	60.2	Silvicultural Systems:	CC, DEF	In Alternative:	2
LUD:	TP	Harvest Acres:	27.6	Quad:	ktnb4sw	Photo:	1390-135
Primary Watershed Code:	E85A	Primary WAA Number:	405	Management Area:	K35	VCU Number:	7570
Number of Settings:	7	Logging System:	HE	Total Estimated Harvest Volume (MBF):	728.5		

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	45.5	Cedar:	14.7	Mixed Hem/Spr:	0.0	Nonforested:	0.0	
Site Productivity Classes	Low:	0.1	Medium:	16.8	High:	43.3	Primary Aspect:				NNE
Volume Strata	Low:	0.1	Medium:	50.7	High:	9.4	Noncommercial:	0.0			
Visuals	Seen:	19.1	Not Seen:	8.5	Primary ROS Code:						RM
VQOs	PR:	0.0	MM:	27.6	M:	0.0	P:	0.0	R:	0.0	
VAC Rating	Low:	0.0	Intermediate:	28.3	High:	31.9	Roadless:				27.6
Mass Movement Index	Low:	16.8	Medium:	0.0	High:	43.4	Very High:	0.0	Slopes Greater Than 72%:	8.3	
Wetland Information	Forested Wetland:		46.9	Scrub-Shrub Muskeg:		13.3					
TLMP High Value Marten Habitat	9.0										

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS: No Concerns

FISH/WATERSHED:

Class II (direct) FP3 northeast: Greater of 130 foot or floodplain RMA buffer required.
Class II (direct) MC1 east: Greater of 120 foot or RMA (top of V-notch) buffer required.
Class II (direct) PA2 north: 100 foot S&G buffer required.

GEOLOGY:

No concerns.

LANDS:

No concerns.

RECREATION/VISUALS: No Concerns

SILVICULTURE:

Highly productive. Clearcut harvest 27 acres. Stand should regenerate naturally. Harvest deferred on 33.2 acres to meet Marten standards (see wildlife). CT 10/22/97

SOILS:

The entire unit consists of forested wetland and scrub-shrub muskeg (BMP 12.5). Helicopter logging is a low impact logging system that will minimize surface disturbance and disruption of water flow and other wetland functions (BMP 13.9). This unit contains 8.3 acres of slopes greater than 72%. 4.6 acres of these steep slopes were placed in deferral areas (BMP 13.5). On the other slopes an on-site analysis by the IDT soil scientist determined that the risk of potential impacts of accelerated erosion on downslope and downstream fish habitat, other beneficial uses of water and other resources was minimal and these slopes are included within the timber harvest unit (BMP 13.2).

TIMBER:

Planned logging systems design for this unit is Helicopter.

WILDLIFE:

Marten guidelines apply: maintain 10-20% of canopy, average 4 large trees/acre (20-30"+), average 3 snags per acre, average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

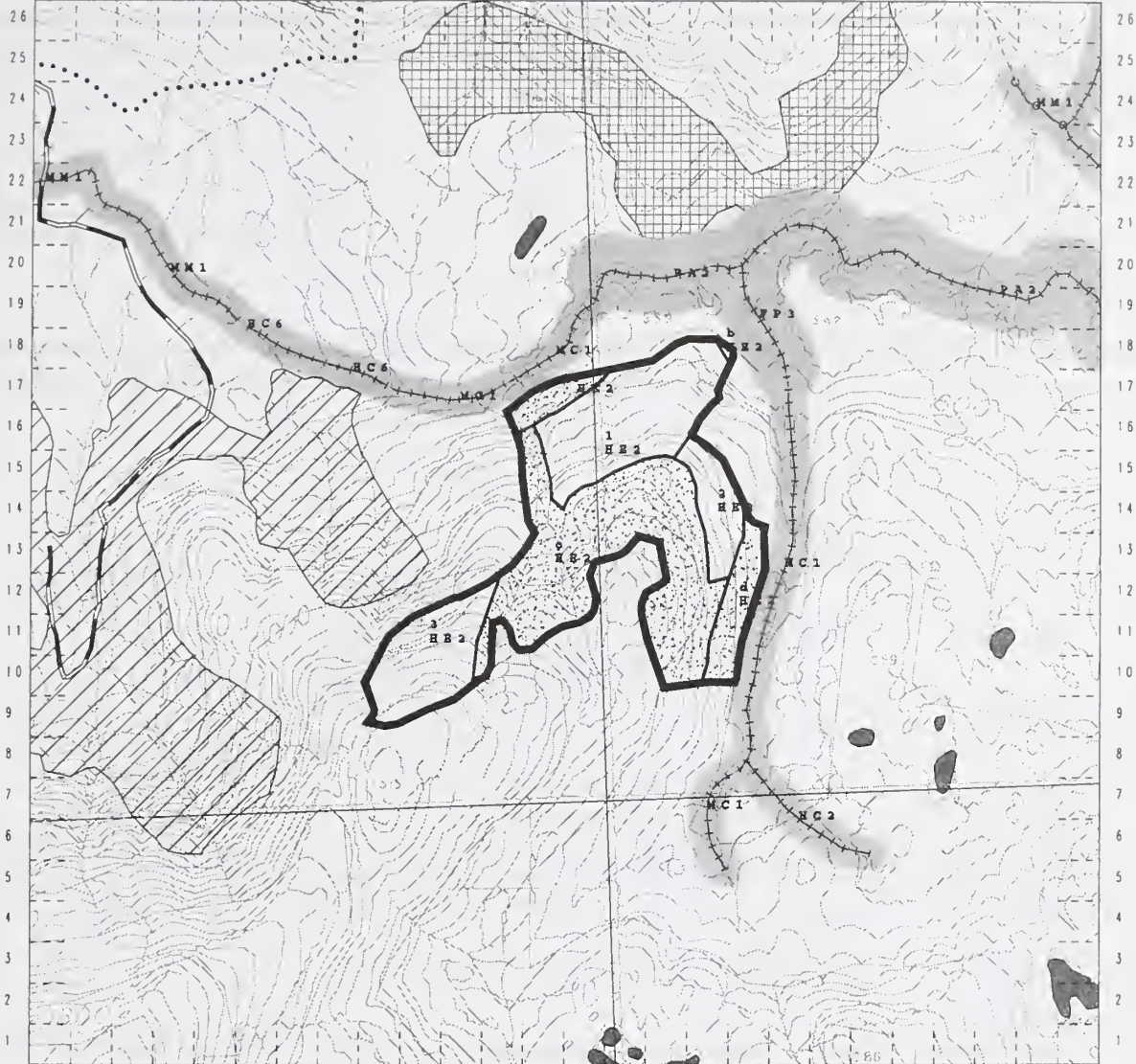
Sealevel Study Area Unit Schematic - Draft Unit 145

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, /files/rel/lib/ary/g:/sealer6/draftcard/draftcard.unt



A B C D E F G H I J K L M N O P Q R S T U V W X Y Z



Note: Compiled from various digital geographic data. This map may not meet National Map Accuracy Standards

	Class 1 Stream		Stream, Beach or Estuary Buffer	Low Volume - 0
	Class 2 Stream		Private Land	Medium Volume - 19
	Class 3 Stream		Riparian Soil Buffer	High Volume - 9
	Section Line		Body of Water	Unknown Volume - 0
	Planning Road		Prior Harvest	Total Acres - 60
	Unit Boundary		Deferred from Harvest	Potential WBF - 800
	Settling Line		Mass Movement Index 4 Soil	Overler Quad - 4464sq
	Contour or Ortho line			VCU Number - 7570
	Other Sealevel			Photo Number - 1390135
				Alternative Pattern - 20000
				* Landing

LOGGING SYSTEMS Abbrev.

RS Running Skyline
HE Helicopter
HL High Lead
SL Slack Line
SH Shovel Yarding

Projection - Stateplane



Eagle Nest



Unit Data Card - Sea Level Draft EIS

Unit Number:	153	Planned Acres:	37.2	Silvicultural System:	CC	In Alternative:	2
LUD:	TP	Harvest Acres:	37.2	Quad:	ktnb4sw	Photo:	1390-52
Primary Watershed Code:	E42A	Primary WAA Number:	405	Management Area:	K35	VCU Number:	7530
Number of Settings:	2	Logging System:	RS	Total Estimated Harvest Volume (MBF):		921.5	

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	36.6	Cedar:	0.6	Mixed Hem/Spr:	0.0	Nonforested:	0.0
Site Productivity Classes	Low:	0.0	Medium:	37.2	High:	0.0	Primary Aspect:			S
Volume Strata	Low:	0.2	Medium:	37.0	High:	0.0	Noncommercial:	0.0		
Visuals	Seen:	0.0	Not Seen:	37.2	Primary ROS Code:					RM
VQOs	PR:	0.0	MM:	37.2	M:	0.0	P:	0.0	R:	0.0
VAC Rating	Low:	0.0	Intermediate:	0.0	High:	37.2	Roadless:			37.2
Mass Movement Index	Low:	0.2	Medium:	0.0	High:	37.0	Very High:	0.0	Slopes Greater Than 72%:	0.0
Wetland Type	Forested Wetland:		5.2							
TLMP High Value Marten Habitat	0.0									

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS: No Concerns

FISH/WATERSHED:

Class I PA5 south: 100 foot buffer required.

Class III HC5 east: Split yard or partial suspension required.

GEOLOGY:

High landslide potential (MMI=3) throughout this unit (See Soils).

LANDS:

No concerns.

RECREATION/VISUALS: No Concerns

SILVICULTURE:

Moderately productive. Clearcut harvest 37.2 acres. Stand should regenerate naturally. CT 10/22/97

SOILS:

This unit consists of high landslide potential (MMI=3) soils (BMP 13.5). Use a low impact logging system which minimizes ground disturbance and provides at least partial log suspension when yarding (BMP 13.9). Roads have been located to avoid these steep, potentially unstable slopes (BMP 14.2). The upper part of this unit contains 5.2 acres of forested wetlands (BMP 12.5). There is no planned road construction on these wetlands (BMP 14.2).

TIMBER:

Planned logging systems design for this unit is Running Skyline. Confirm final road and landing locations.

WILDLIFE:

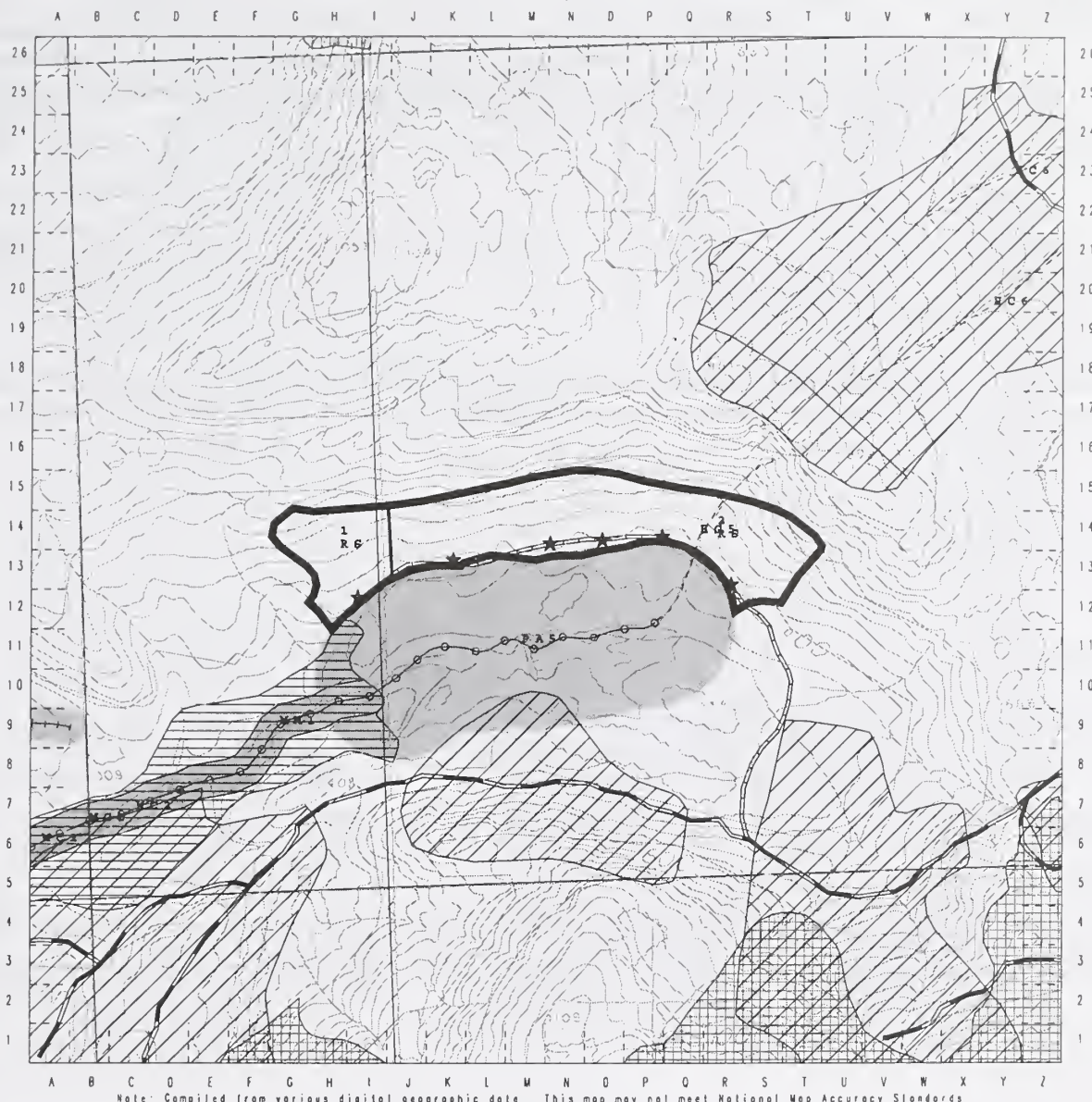
No wildlife mitigation anticipated for this unit.

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 153

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, //s://files/ra/rl/library/gis/sealevel/draftcard/draftcard.mxd



	Class 1 Stream		Stream, Beach or Estuary Buffer
	Class 2 Stream		Private Land
	Class 3 Stream		Riparian Soil Buffer
	Section Line		Body of Water
	Planning Road		Prior Harvest
	Unit Boundary		Deferred from Harvest
	Settling Line		Mass Movement Index 4 Soil
	Contour or Ortho line		
	Other Sealevel		

Low Volume - 0
 Medium Volume - 37
 High Volume - 0
 Unknown Volume - 0
 Total Acres - 37
 Potential WBF - 972
 Quarter Quad - 41444
 VCU Number - 7530
 Photo Number - 1390052
 Alternative Pattern - 20000
 ★ Landing

LOGGING SYSTEMS Abbrev

RS Running Skyline
 HE Helicopter
 HL High Lead
 SL Slack Line
 SH Shovel Yarding

Projection - Stateplane



Eagle Nest



Unit Data Card - Sea Level Draft EIS

Unit Number:	164	Planned Acres:	22.9	Silvicultural Systems:	CC, DEF	In Alternative:	none
LUD:	ML	Harvest Acres:	5.7	Quad:	ktnb4sw	Photo:	1390-73
Primary Watershed Code:	EX8A	Primary WAA Number:	405	Management Area:	K35	VCU Number:	7570
Number of Settings:	5	Logging System:	RS	Total Estimated Harvest Volume (MBF):		141.2	

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	22.9	Cedar:	0.0	Mixed Hem/Spr:	0.0	Nonforested:	0.0
Site Productivity Classes	Low:	0.0	Medium:	0.0	High:	22.9	Primary Aspect:			S
Volume Strata	Low:	0.0	Medium:	22.0	High:	0.9	Noncommercial:	0.0		
Visuals	Seen:	5.7	Not Seen:	0.0	Primary ROS Code:					RM
VQOs	PR:	5.7	MM:	0.0	M:	0.0	P:	0.0	R:	0.0
VAC Rating	Low:	22.9	Intermediate:	0.0	High:	0.0	Roadless:			5.7
Mass Movement Index	Low:	22.9	Medium:	0.0	High:	0.0	Very High:	0.0	Slopes Greater Than 72%:	1.6
Wetland Type	Forested Wetland:		15.6							
TLMP High Value Marten Habitat	0.0									

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS: No Concerns

FISH/WATERSHED: No Concerns

GEOLOGY:

LANDS:

RECREATION/VISUALS: No Concerns

SILVICULTURE:

Highly productive. Clearcut harvest 5 acres. Stand should regenerate naturally. Harvest deferred on 17.9 acres. CT 10/22/97

SOILS:

TIMBER:

Planned logging systems design for this unit is Running Skyline. Confirm final road and landing locations.

WILDLIFE:

Maintain Old-growth Habitat Reserve along southwest boundary.

Maintain 1000 foot beach buffer.

Unit is within 0.5 miles of bald eagle nest. Follow Interagency Agreement. Blasting prohibited within 0.5 mile of nest March 1 through May 31. If nest is determined active, blasting prohibited within 0.5 mile of nest June 1 through August 31.

Unit Data Card - Sea Level Draft EIS

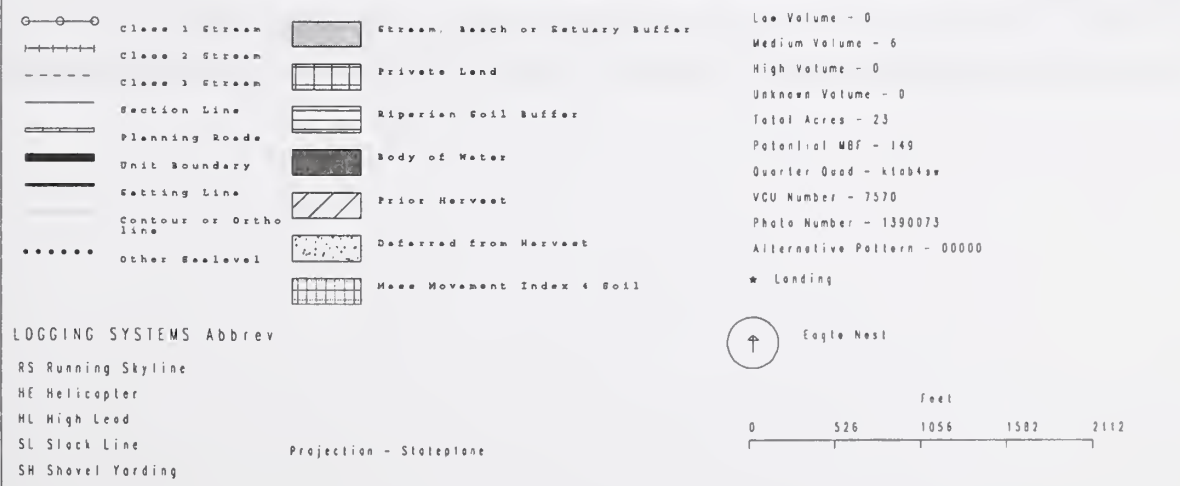
Sealevel Study Area Unit Schematic - Draft Unit 164

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, /files/rel/library/gis/sealevel/draftcard/draftcard.mxd



Note: Compiled from various digital geographic data. This map may not meet National Map Accuracy Standards



Unit Data Card - Sea Level Draft EIS

Unit Number:	165	Planned Acres:	32.8	Silvicultural Systems:	CC, DEF	In Alternative:	2
LUD:	ML	Harvest Acres:	8.7	Quad:	ktnb4sw	Photo:	1390-73
Primary Watershed Code:	EX8A	Primary WAA Number:	405	Management Area:	K35	VCU Number:	7570
Number of Settings:	6	Logging System:	RS	Total Estimated Harvest Volume (MBF):			250.8

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	32.8	Cedar:	0.0	Mixed Hem/Spr:	0.0	Nonforested:	0.0
Site Productivity Classes	Low:	0.0	Medium:	0.0	High:	32.8	Primary Aspect:			SE
Volume Strata	Low:	0.0	Medium:	14.5	High:	18.3	Noncommercial:	0.0		
Visuals	Seen:	8.7	Not Seen:	0.0	Primary ROS Code:					RM
VQOs	PR:	8.7	MM:	0.0	M:	0.0	P:	0.0	R:	0.0
VAC Rating	Low:	32.8	Intermediate:	0.0	High:	0.0	Roadless:			8.7
Mass Movement Index	Low:	0.0	Medium:	32.8	High:	0.0	Very High:	0.0	Slopes Greater Than 72%: 0.2	
Wetland Type	Forested Wetland:			27.5						
TLMP High Value Marten Habitat	13.8									

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO lt 1/2/96 RAL

ENGINEERING/ROADS: No Concerns

FISH/WATERSHED:

Class IV HC5 west: Split yard or partial suspension required.

Class III HC6 west: Sideslope S&G buffer to form unit boundary.

GEOLOGY:

No concerns.

LANDS:

No concerns.

RECREATION/VISUALS: No Concerns

SILVICULTURE:

Highly productive. Use small patch cuts to harvest 9 acres. Leave approximately 23.8 acres unharvested to meet Marten standards (see wildlife). Patches should regenerate naturally. CT 10/21/97

SOILS:

Most of this unit consists of forested wetland (BMP 12.5). Recommend the use of a low impact logging system that will provide at least partial log suspension when yarding on wetlands, and minimizes ground disturbance (BMP 13.9). use overlay road construction on wetlands with minimal side-ditching, where practicable, to minimize the disruption of subsurface drainage (BMPs 12.5 and 14.3). Avoid the use of these wetlands as disposal sites for waste material (BMP 14.12).

TIMBER:

Planned logging systems design for this unit is Running Skyline. Confirm final road and landing locations.

WILDLIFE:

Unit is within 0.5 miles of bald eagle nest. Follow Interagency Agreement. Blasting prohibited within 0.5 mile of nests March 1 through May 31. If nest is determined active, blasting prohibited within 0.5 mile of nest June 1 through August 31.

Maintain 1000 foot beach buffer.

Marten guidelines apply: maintain 10-20% of canopy, average 4 large trees/acre (20-30"+), average 3 snags per acre, average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 165

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, //sfiles/ref/library/gis/sealevel/draftcard/draftcard.mxd



<ul style="list-style-type: none"> Class 1 Stream Class 2 Stream Class 3 Stream Section Line Planning Road Unit Boundary Setting Line Contour or Ortho line Other Sealevel 	<ul style="list-style-type: none"> Stream, Beach or Estuary Buffer Private Land Riparian Soil Buffer Body of Water Prior Harvest Deferred from Harvest Mass Movement Index 4 Soil 	<ul style="list-style-type: none"> Low Volume - 0 Medium Volume - 2 High Volume - 7 Unknown Volume - 0 Total Acres - 33 Potential MBR - 289 Overlaid Quad - 41415 VCU Number - 7570 Photo Number - 1390073 Alternative Pattern - 20000 ★ Landing
---	--	---

LOGGING SYSTEMS Abbrev.

RS Running Skyline
HE Helicopter
HL High Lead
SL Slack Line
SH Shovel Yarding

Projection - Stateplane

Feet
0 526 1056 1582 2112

Eagle Nest

Unit Data Card - Sealevel Draft EIS

Unit Number:	166	Planned Acres:	63.9	Silvicultural Systems:	ITM, DEF	In Alternative:	2
LUD:	ML	Harvest Acres:	25.3	Quad:	ktnb4sw	Photo:	1390-73
Primary Watershed Code:	E77A	Primary WAA Number:	405	Management Area:	K35	VCU Number:	7570
Number of Settings:	4	Logging System:	HE	Total Estimated Harvest Volume (MBF):	337.9		

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	55.2	Cedar:	8.7	Mixed Hem/Spr:	0.0	Nonforested:	0.0
Site Productivity Classes	Low:	0.0	Medium:	0.0	High:	63.9	Primary Aspect: SSE			
Volume Strata	Low:	0.0	Medium:	31.4	High:	32.5	Noncommercial:	0.0		
Visuals	Seen:	25.3	Not Seen:	0.0	Primary ROS Code: RM					
VQOs	PR:	5.6	MM:	0.0	M:	19.7	P:	0.0	R:	0.0
VAC Rating	Low:	17.0	Intermediate:	46.9	High:	0.0	Roadless: 25.3			
Mass Movement Index	Low:	0.0	Medium:	55.9	High:	8.0	Very High:	0.0	Slopes Greater Than 72%:	6.7
Wetland Type	Forested Wetland:			25.8						
TLMP High Value Marten Habitat	34.0									

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS: No Concerns

FISH/WATERSHED:

Class III lake northeast: 100 foot buffer required.

Class III HC6 center south: Sideslope S&G buffer (top of V-notch), split yard or full suspension required.

Class III HC6 east: Sideslope S&G buffer (top of V-notch), split yard or full suspension required.

GEOLOGY:

High landslide potential. See Soils for mitigation measures.

LANDS:

No concerns.

RECREATION/VISUALS: No Concerns

SILVICULTURE:

Helicopter harvest 26 acres using a diameter limit prescription. Defer harvest on 37.9 acres to meet Marten standards (see wildlife). CT 10/21/97

SOILS:

This unit contains 6.7 acres of slopes greater than 72%. 4.4 acres of these steep slopes were placed in deferral areas (BMP 13.5). The other steep slopes were evaluated, on-site by the IDT soil scientist determined that the risk of potential impacts of accelerated erosion on downslope and downstream fish habitat, other beneficial uses of water and other resources was minimal and these slopes are included within the timber harvest unit (BMP 13.2). This unit contains eight acres of high landslide potential (MMI=3) soils (BMP 13.5). Roads have been located to avoid these steep, potentially unstable slopes (BMP 14.2). The central and western part of this unit contains over 25 acres of forested wetlands (BMP 12.5). Use a low impact yarding system which minimizes ground disturbance and provides at least partial log suspension when yarding on high landslide potential areas and wetlands (BMP 13.9). Road construction on these wetlands should use overlay design with minimal side-ditching to minimize the effects upon groundwater flow (BMP 14.3). Avoid the use of these wetlands as disposal sites for overburden or other fill (BMP 14.19).

TIMBER:

Planned logging systems design for this unit is Helicopter.

WILDLIFE:

East end of unit is within 0.5 miles of bald eagle nest. Follow Interagency Agreement. Blasting prohibited within 0.5 mile of nests March 1 through May 31. If nest is determined active, blasting prohibited within 0.5 mile of nest June 1 through August 31. Avoid repeated helicopter flights (logging, heliports) within 0.25 miles of active bald eagle nest.
Marten guidelines apply: maintain 10-20% of canopy, average 4 large trees/acre (20-30"+), average 3 snags per acre, average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sealevel Draft EIS

















Smallwood Study Area Unit Schematic - Draft Unit 166

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, //sites/ref/library/gis/scalv6/droftcord/droftcord.xml



Note: Compiled from various digital geographic data. This map may not meet National Map Accuracy Standards.

	Class 1 Stream		Stream, Beach or Wetland Buffer
	Class 2 Stream		Private Land
	Class 3 Stream		Riparian Soil Buffer
	Section Line		Planning Roads
	Unit Boundary		Body of Water
	Setting Line		Prior Harvest
	Contour or Ortho line		Deferred from Harvest
	Other Sealevel		Mass Movement Index 4 Soil

```

Low Volume - 0
Medium Volume - 8
High Volume - 5
Unknowns Volume - 0
Total Acres - 64
Potential MBF - 374
Quarter Quad - ktnbtsw
VCU Number - 7570
Phone Number - 1390073
Alternative Pattern - 20000
★ Loading

```

LOGGING SYSTEMS Abbrev.

RS Running Skyline

HE Helicopter

HL High Lead

SL Stock Line

SH Shovel Yarding

Projection - Slopeplane



Eagle Nest

feel



Unit Data Card - Sea Level Draft EIS

Unit Number:	167	Planned Acres:	42.3	Silvicultural Systems:	CC, ITM, DEF	In Alternative:	none
LUD:	ML	Harvest Acres:	20.1	Quad:	ktnb4sw	Photo:	1390-73
Primary Watershed Code:	E77A	Primary WAA Number:	405	Management Area:	K35	VCU Number:	7570
Number of Settings:	4	Logging Systems:	HE, RS	Total Estimated Harvest Volume (MBF):		476.3	

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	42.3	Cedar:	0.0	Mixed Hem/Spr:	0.0	Nonforested:	0.0	
Site Productivity Classes	Low:	0.0	Medium:	0.0	High:	42.3	Primary Aspect:			E	
Volume Strata	Low:	0.0	Medium:	36.0	High:	6.3	Noncommercial:	0.0			
Visuals	Seen:	20.1	Not Seen:	0.0				Primary ROS Code:			RM
VQOs	PR:	20.1	MM:	0.0	M:	0.0	P:	0.0	R:	0.0	
VAC Rating	Low:	42.2	Intermediate:	0.1	High:	0.0	Roadless:			20.1	
Mass Movement Index	Low:	0.0	Medium:	0.0	High:	42.3	Very High:	0.0	Slopes Greater Than 72%:		0.3
Wetland Type			Forested Wetland:	23.5							
TLMP High Value Marten Habitat	9.0										

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS: No Concerns

FISH/WATERSHED: No Concerns

GEOLOGY:

LANDS:

RECREATION/VISUALS: No Concerns

SILVICULTURE:

High productivity. Clearcut harvest 17 acres. Helicopter harvest 4 acres using a diameter limit prescription. Defer harvest on 21.3 acres to meet Marten standards (see wildlife). CT 10/21/97

SOILS:

TIMBER:

Planned logging systems design for this unit is Running Skyline. Confirm final road and landing locations.

WILDLIFE:

South portion of the unit is within 0.5 miles of bald eagle nest. Follow Interagency Agreement. Blasting prohibited within 0.5 mile of nest March 1 through May 31. If nest is determined active, blasting prohibited within 0.5 mile of nest June 1 through August 31. Avoid repeated helicopter flights (logging, heliports) within 0.25 miles of active bald eagle nest.
Maintain 1000 foot beach buffer.
Marten guidelines apply: maintain 10-20% of canopy, average 4 large trees/acre (20-30"+), average 3 snags per acre, average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 167

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, //file:///c:/libray/gis/sealevel/draftcard/draftcard.mxd



Note: Compiled from various digital geographic data. This map may not meet National Map Accuracy Standards

	Class 1 Stream		Stream, Beach or Estuary Buffer
	Class 2 Stream		Private Land
	Class 3 Stream		Riparian Soil Buffer
	Section Line		Body of Water
	Planning Road		Prior Harvest
	Unit Boundary		Deferred from Harvest
	Setting Line		Mass Movement Index 4 Soil
	Contour or Ortho line		
	Other Sealevel		

Low Volume - 0
 Medium Volume - 17
 High Volume - 1
 Unknown Volume - 0
 Total Acres - 42
 Potential WBF - 491
 Overler Quad - klabaw
 VCU Number - 7570
 Photo Number - 1390073
 Alternative Pattern - 00000
 * Landing

LOGGING SYSTEMS Abbrev.

RS Running Skyline
 HE Helicopter
 HL High Lead
 SL Stock Line
 SH Shovel Yarding

Projection - Stateplane



Eagle Nest



Unit Data Card - Sea Level Draft EIS

Unit Number:	168	Planned Acres:	34.6	Silvicultural Systems:	CC, ITM, DEF	In Alternative:	2
LUD:	TP	Harvest Acres:	19.6	Quad:	ktnb4sw	Photo:	1390-74
Primary Watershed Code:	E77A	Primary WAA Number:	405	Management Area:	K35	VCU Number:	7560
Number of Settings:	7	Logging Systems:	RS, SH	Total Estimated Harvest Volume (MBF):		550.7	

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	22.4	Cedar:	0.0	Mixed Hem/Spr:	12.2	Nonforested:	0.0
Site Productivity Classes	Low:	0.0	Medium:	34.2	High:	0.5	Primary Aspect: NNE			
Volume Strata	Low:	0.0	Medium:	0.0	High:	34.6	Noncommercial:	0.0		
Visuals	Seen:	7.1	Not Seen:	12.5					Primary ROS Code:	RM
VQOs	PR:	4.1	MM:	8.5	M:	3.0	P:	0.0	R:	0.0
VAC Rating	Low:	1.3	Intermediate:	22.2	High:	11.2	Roadless: 0.0			
Mass Movement Index	Low:	34.6	Medium:	0.0	High:	0.0	Very High:	0.0	Slopes Greater Than 72%: 0.0	
Wetland Type			Forested Wetlands:	15.1						
TLMP High Value Marten Habitat	34.6									

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS: No Concerns

FISH/WATERSHED:

Class I HC3 northeast: Greater of 100 foot or RMA (top of V-notch) buffer.
 Class II (direct) HC3 north: Greater of 100 foot or RMA (top of V-notch) buffer required.
 Class II (direct) FP3 north: Greater of 130 foot or floodplain RMA buffer required.
 Class II (direct) MM1 north: Greater of 120 foot or RMA buffer required.
 Class III HC5 east: Sideslope S&G buffer (top of V-notch), split yard or full suspension required.
 Class III HC5 (2 each) northeast: Sideslope S&G buffer (top of V-notch), split yard or full suspension required.

GEOLOGY:

No concerns.

LANDS:

No concerns.

RECREATION/VISUALS:

No Concerns.

SILVICULTURE:

Moderately productive. Use small patch cuts to harvest 16 acres. Leave approximately 15 acres unharvested to meet Marten standards (see wildlife). Individual tree selection will be used to harvest 4 acres for silvicultural objectives and to meet Marten standards. Stand should regenerate naturally. CT 10/21/97

SOILS:

The southern and western parts of this unit consist of forested wetlands (BMP 12.5). Provide at least partial log suspension when yarding on these wetlands to minimize the disruption of wetland functions (BMP 13.9). No road construction is planned on these wetlands (BMP 14.2).

TIMBER:

Planned logging systems design for this unit is Running Skyline and Shovel. Confirm final road and landing locations.

WILDLIFE:

Marten guidelines apply: maintain 30% canopy closure, average 8 large trees/acre (20-30"+), average 3 large decadent trees/acre (20-30"+) average 3 pieces downed logs per acre (20-30"+). Maintain 1000 foot beach buffer.

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 168

Mapscale 1:12000 (5 inch to mile)

Created 11-17-1997, //files/rel/library/gis/sealevel/draftcard/draftcard.mxd



- | | | | |
|--|-----------------------|--|---------------------------------|
| | Class 1 Stream | | Stream, Beach or Estuary Buffer |
| | Class 2 Stream | | Private Land |
| | Class 3 Stream | | Riparian Soil Buffer |
| | Section Line | | Body of Water |
| | Planning Roads | | Prior Harvest |
| | Unit Boundary | | Deferred from Harvest |
| | Setting Line | | Mass Movement Index & Soil |
| | Contour or Ortho line | | |
| | Other Sealevel | | |

Low Volume - 0
 Medium Volume - 0
 High Volume - 18
 Unknown Volume - 0
 Total Acres - 35
 Potential MBF - 616
 Quarter Quad - klnb4sw
 VCU Number - 7560
 Photo Number - 1390074
 Alternative Pattern - 20000
 * Landing

LOGGING SYSTEMS Abbrev.

RS Running Skyline
 HE Helicopter
 HL High Lead
 SL Slack Line
 SH Shovel Yarding

Projection - Stateplane



Eagle Nest



Unit Data Card - Sea Level Draft EIS

Unit Number:	169	Planned Acres:	38.0	Silvicultural Systems:	CC, DEF	In Alternative:	none
LUD:	ML	Harvest Acres:	14.4	Quad:	ktnb4sw	Photo:	1390-73
Primary Watershed Code:	E77A	Primary WAA Number:	405	Management Area:	K35	VCU Number:	7570
Number of Settings:	4	Logging System:	RS	Total Estimated Harvest Volume (MBF): 422.0			

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	38.0	Cedar:	0.0	Mixed Hem/Spr:	0.0	Nonforested:	0.0
Site Productivity Classes	Low:	0.0	Medium:	0.0	High:	38.0	Primary Aspect:			SE
Volume Strata	Low:	0.0	Medium:	22.9	High:	15.1	Noncommercial:	0.0		
Visuals	Seen:	14.4	Not Seen:	0.0	Primary ROS Code:					RM
VQOs	PR:	0.0	MM:	0.0	M:	14.4	P:	0.0	R:	0.0
VAC Rating	Low:	3.4	Intermediate:	34.6	High:	0.0	Roadless:			0.0
Mass Movement Index	Low:	0.0	Medium:	0.0	High:	38.0	Very High:	0.0	Slopes Greater Than 72%:	1.7
Wetland Information	Forested Wetland:		22.6							
TLMP High Value Marten Habitat	16.0									

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS: No Concerns

FISH/WATERSHED: No concerns

GEOLOGY:

LANDS:

RECREATION/VISUALS: No Concerns

SILVICULTURE:

Highly productive. Clearcut harvest 15 acres. Stand should regenerate naturally. Harvest deferred on 23 acres to meet Marten standards (see wildlife). CT 10/22/97

SOILS:

TIMBER:

Planned logging systems design for this unit is Running Skyline. Confirm final road and landing locations.

WILDLIFE:

Marten guidelines apply: maintain 10-20% of canopy, average 4 large trees/acre (20-30"+), average 3 snags per acre, average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

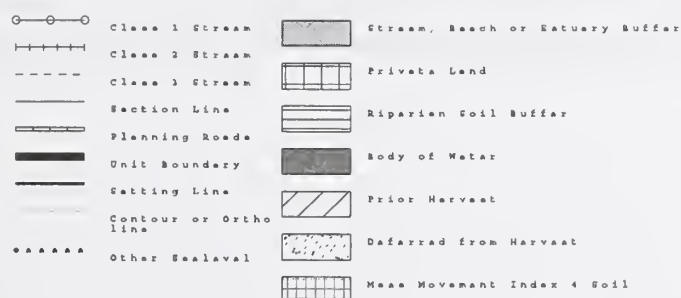
Sealevel Study Area Unit Schematic - Draft Unit 169

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, //files/ref/library/gis/usnavs6/draftcord/draftcord.eml



Note: Compiled from various digital geographic data. This map may not meet National Map Accuracy Standards.



Low Volume - 0
Medium Volume - 1
High Volume - 13
Unknown Volume - 0
Total Acres - 38
Paternal MBF - 492
Quarter Dead - klabtsw
VCU Number - 7570
Photo Number - 1390073
Alternative Pattern - 00000
★ Landing

LOGGING SYSTEMS Abbrev.

RS Running Skyline
HE Helicopter
HL High Lead
SL Stock Line
SH Shovel Yarding

Projection - Stolepione



Eagle Nest

Feel



Unit Data Card - Sea Level Draft EIS

Unit Number:	171	Planned Acres:	122.7	Silvicultural Systems:	CC, ITM, DEF	In Alternatives:	2, 3
LUD:	ML	Harvest Acres:	85.4	Management Area:	K35	VCU Number:	7560
Primary Watershed Code:	E77A	Primary WAA Number:	405	Quad:	ktnb4sw	Photo:	1390-49
Number of Settings:	6	Logging Systems:	RS, LS	Total Estimated Harvest Volume (MBF):		1,425.7	

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	122.6	Cedar:	0.0	Mixed Hem/Spr:	0.1	Nonforested:	0.0					
Site Productivity Classes	Low:	0.0	Medium:	0.0	High:	122.7	Primary Aspect:				SE				
Volume Strata	Low:	0.0	Medium:	0.0	High:	121.4	Noncommercial:	1.3	Primary ROS Code:			RM			
Visuals	Seen:	61.8	Not Seen:	23.6	R:							0.0			
VQOs	PR:	33.5	MM:	23.6	M:	28.3	P:	0.0	Slopes Greater Than 72%:			0.1			
VAC Rating	Low:	0.0	Intermediate:	65.6	High:	57.1	Roadless:					0.0			
Mass Movement Index	Low:	0.0	Medium:	122.7	High:	0.0	Very High:	0.0				Forest Type			Forested Wetland:
Wetland Type											TLMP High Value Marten Habitat		121.7		

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS: No Concerns

FISH/WATERSHED:

Class I MM1 South: Greater of 120 foot or RMA buffer required.

Class II (direct) HC2 MM1 south: Greater of 120 foot or RMA (top of V-notch) buffer required.

Class II (direct) HC6 north: Greater of 100 foot or RMA (top of V-notch) buffer required.

GEOLOGY:

Unit contains some minor karst features. The potential to find significant karst resources in this unit is considered to be low. If significant karst features are identified during layout, appropriate karst resource protection standards will be applied.

LANDS:

No concerns.

RECREATION/VISUALS: Only 10.3 acres of patch clearcut harvest in the middleground distance may be visible; the remainder is ITM.

SILVICULTURE:

Highly productive. Use small patch cuts to harvest 10 acres. Leave approximately 37 acres unharvested to meet Marten standards (see wildlife). Harvest remainder of unit using individual tree selection with a prescription designed to meet silvicultural objectives while meeting Marten standards. Patches should regenerate naturally. CT 10/21/97

SOILS:

Forested wetlands are located around the margins of this harvest unit (BMP 12.5). Use a low impact logging system which minimizes ground disturbance and provides at least partial log suspension when yarding on these wetlands (BMP 13.9). Use overlay road construction on these wetlands with minimal side-ditching, where practicable, to minimize the effects upon subsurface drainage (BMP 14.3). Avoid the use of these wetlands for the disposal of waste material (BMP 14.12).

TIMBER:

Planned logging systems design for this unit is Running Skyline and Live Skyline. Confirm final road, landing locations, and yarding corridors.

WILDLIFE:

Marten guidelines apply: maintain 30% canopy closure, average 8 large trees/acre (20-30"+), average 3 large decadent trees/acre (20-30"+) average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 171

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, //s://files/rul/library/gis/sealevel/draftcard/draftcard.mxd



	Class 1 Stream		Stream, Beach or Retuary Buffer	Low Volume - 0
	Class 2 Stream		Private Land	Medium Volume - 0
	Class 3 Stream		Riparian Soil Buffer	High Volume - 47
	Section Line		Body of Water	Unknown Volume - 0
	Planning Road		Prior Harvest	Total Acres - 123
	Unit Boundary		Deferred from Harvest	Potential MBF - 1656
	Setting Line		Mass Movement Index 4 Soil	Quarter Oad - klab4sw
	Contour or Ortho line			VCU Number - 7560
	Other Sealevel			Photo Number - 1390049
				Alternative Pattern - 23000
				* Landing

LOGGING SYSTEMS Abbrev

RS Running Skyline
HE Helicopter
HL High Lead
SL Slack Line
SH Shovel Yarding

Projection - Stateplane



Eagle Nest



Unit Data Card - Sea Level Draft EIS

Unit Number:	172	Planned Acres:	71.7	Silvicultural Systems:	CC, ITM, DEF	In Alternative:	2
LUD:	TP	Harvest Acres:	64.1	Quad:	kinb4sw	Photo:	1390-49
Primary Watershed Code:	E77A	Primary WAA Number:	405	Management Area:	K35	VCU Number:	7560
Number of Settings:	12	Logging Systems:	RS, LS	Total Estimated Harvest Volume (MBF):		1,038.8	

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	71.7	Cedar:	0.0	Mixed Hem/Spr:	0.0	Nonforested:	0.0	
Site Productivity Classes	Low:	0.0	Medium:	0.0	High:	71.7	Primary Aspect:				SSE
Volume Strata	Low:	0.0	Medium:	0.0	High:	71.7	Noncommercial:	0.0			
Visuals	Seen:	31.7	Not Seen:	32.4	Primary ROS Code:						RM
VQOs	PR:	0.0	MM:	64.1	M:	0.0	P:	0.0	R:	0.0	
VAC Rating	Low:	0.0	Intermediate:	34.4	High:	37.3	Roadless:				64.1
Mass Movement Index	Low:	0.0	Medium:	71.7	High:	0.0	Very High:	0.0	Slopes Greater Than 72%:		0.0
Wetland Type	Forested Wetland:			2.5							
TLMP High Value Marten Habitat	71.7										

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO 1/2/96 RAL

ENGINEERING/ROADS: No Concerns

FISH/WATERSHED:

Class I MMI northeast: Greater of 120 foot or RMA buffer required.

Class II (direct) HC3 north: Greater of 100 foot or RMA (top of V-notch) buffer required

Class II (direct) HC2 south: Greater of 100 foot or RMA (top of V-notch) buffer required.

Class III HC5 southwest: Sideslope S&G buffer to form unit boundary

GEOLOGY:

Unit is located in an area of low karst vulnerability. No karst features have been identified in this unit. The potential to find significant karst resources in this unit is considered to be low.

LANDS:

No concerns.

RECREATION/VISUALS: No Concerns; only 5.6 acres would be visible patch clearcut.

SILVICULTURE:

Highly productive. Use small patch cuts to harvest 6 acres. Leave approximately 7.5 acres unharvested to meet Marten standards (see wildlife). Patches should regenerate naturally. Harvest remainder of unit using individual tree selection with a prescription designed to meet silvicultural objectives while meeting Marten standards. CT 10/27/97

SOILS:

This unit contains only a small area (2.5 acres) of forested wetlands in the southern part of the unit (BMP 12.5). Use a low impact logging system which minimizes ground disturbance and provides at least partial log suspension when yarding on these wetlands (BMP 13.9). Roads have been located to avoid these wetlands (BMP 14.2).

TIMBER:

Planned logging systems design for this unit is Running Skyline and Live Skyline. Confirm final road, landing locations, and yarding corridors.

WILDLIFE:

Marten guidelines apply: maintain 30% canopy closure, average 8 large trees/acre (20-30"+), average 3 large decadent trees/acre (20-30"+) average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 172

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, /s/tiles/rel/library/gis/sealevel/draftcard/draftcard.mxd



<ul style="list-style-type: none"> Class 1 Stream Class 2 Stream Class 3 Stream Section Line Planning Road Unit Boundary Setting Line Contour or Ortho line Other Sealevel 	<ul style="list-style-type: none"> Stream, Beach or Estuary Buffer Private Land Riparian Coil Buffer Body of Water Prior Harvest Defatted from Harvest Mass Movement Index 4 Soil 	<ul style="list-style-type: none"> Low Volume - 0 Medium Volume - 0 High Volume - 35 Unknown Volume - 0 Total Acres - 72 Potential MBF - 1220 Quarter Quad - klab43w VCU Number - 7560 Photo Number - 1390049 Alternative Pattern - 20000 * Landing
---	--	--

LOGGING SYSTEMS Abbrev.

RS Running Skyline
 HE Helicopter
 HL High Lead
 SL Slack Line
 SH Shovel Yarding

Projection - Stateplane

Eagle Nest

Feet
 0 526 1056 1582 2112

Unit Data Card - Sea Level Draft EIS

Unit Number:	173	Planned Acres:	47.4	Silvicultural Systems:	CC, ITM, DEF	In Alternatives:	2, 3
LUD:	ML	Harvest Acres:	32.7	Management Area:	K35	VCU Number:	7530
Primary Watershed Code:	E77A	Primary WAA Number:	405	Quad:	ktnb4sw	Photo:	1390-48
Number of Settings:	10	Logging Systems:	RS, SH	Total Estimated Harvest Volume (MBF):		558.9	

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	47.3	Cedar:	0.0	Mixed Hem/Spr:	0.1	Nonforested:	0.0	
Site Productivity Classes	Low:	0.0	Medium:	0.0	High:	47.4	Primary Aspect:				N
Volume Strata	Low:	0.0	Medium:	16.1	High:	31.2	Noncommercial:	0.1			
Visuals	Seen:	16.8	Not Seen:	15.9					Primary ROS Code:	RM	
VQOs	PR:	0.0	MM:	15.9	M:	16.8	P:	0.0	R:	0.0	
VAC Rating	Low:	3.0	Intermediate:	17.4	High:	27.0	Roadless:				0.0
Mass Movement Index	Low:	47.4	Medium:	0.0	High:	0.0	Very High:	0.0	Slopes Greater Than 72%:		0.0
Wetland Type	Forested Wetland:			13.6	Tall Sedge Fen:			1.1			
TLMP High Value Marten Habitat	31.0										

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS:

No Concerns

FISH/WATERSHED:

Class I MC3 east: Greater of 120 foot or RMA (top of V-notch) buffer required.
Class II (direct) MC2 southeast: Greater of 120 foot or RMA (top of V-notch) buffer required.
Class IV HC2 center north: Split yard or partial suspension required.

GEOLOGY:

No concerns.

LANDS:

No concerns.

RECREATION/VISUALS:

No Concerns; only 2.4 acres would be visible as a patch clearcut.

SILVICULTURE:

Highly productive. Use small patch cuts to harvest 7 acres. Leave approximately 14 acres unharvested to meet Marten standards (see wildlife). Harvest remainder of unit using individual tree selection with a prescription designed to meet silvicultural objectives while meeting Marten standards. Patches should regenerate naturally. CT 10/21/97

SOILS:

This unit contains forested wetlands and tall sedge fens (BMP 12.5). planned access roads have been located to minimize the amount of road construction on these wetlands (BMPs 14.1 and 14.2). Where the planned road crosses the tall sedge fen use overlay construction and avoid side-ditching (BMP 14.3). Provide adequate cross drains to accommodate surface and subsurface flows (BMP 14.17). Avoid the placement of waste material or excessive fill material on these wetlands (BMP 14.12). Use a low impact logging system on forested wetlands to minimize ground disturbance and provide at least partial log suspension when yarding (13.9).

TIMBER:

Planned logging systems design for this unit is Running Skyline and Shovel. Confirm final road and landing locations. Confirm yaring corridors within Running Skyline setting.

WILDLIFE:

Maintain 1000 foot estuary buffer. Harvest activities restricted to April 1 through November 1 to protect wintering waterfowl area (Gnat Cove). Marten guidelines apply: maintain 10-20% of canopy, average 4 large trees/acre (20-30"+), average 3 snags per acre, average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 173

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, /1st/ica/rel/library/gis/sealevel/draftcard/draftcard.mxd



Note: Compiled from various digital geographic data. This map may not meet National Map Accuracy Standards

<ul style="list-style-type: none"> Class 1 Stream Class 2 Stream Class 3 Stream Section Line Planning Road Unit Boundary Setting Line Contour or Ortho line Other Sealevel 	<ul style="list-style-type: none"> Stream, Beach or Estuary Buffer Private Land Riparian Soil Buffer Body of Water Prior Harvest Deferred from Harvest Mass Movement Index 4 Soil 	<ul style="list-style-type: none"> Low Volume - 0 Medium Volume - 6 High Volume - 13 Unknown Volume - 0 Total Acres - 47 Potential MBF - 637 Georler Quad - kimb4se VCU Number - 7530 Photo Number - 1390048 Alternative Pattern - 23000 ★ Landing
---	--	---

LOGGING SYSTEMS Abbrev.

RS Running Skyline
HE Helicopter
HL High Lead
SL Slack Line
SH Shovel Yarding

Projection - Stateplane



Eagle Nest



Unit Data Card - Sea Level Draft EIS

Unit Number:	174	Planned Acres:	32.3	Silvicultural Systems:	CC, DEF	In Alternative:	2
LUD:	ML	Harvest Acres:	25.9	Quad:	ktnb4sw	Photo:	1390-49
Primary Watershed Code:	E77A	Primary WAA Number:	405	Management Area:	K35	VCU Number:	7530
Number of Settings:	4	Logging Systems:	RS, SL	Total Estimated Harvest Volume (MBF):	753.2		

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	31.4	Cedar:	0.0	Mixed Hem/Spr:	0.9	Nonforested:	0.0	
Site Productivity Classes	Low:	0.0	Medium:	0.0	High:	32.3	Primary Aspect:				N
Volume Strata	Low:	0.0	Medium:	0.0	High:	31.4	Noncommercial:	0.9			
Visuals	Seen:	25.9	Not Seen:	0.0	Primary ROS Code:						RM
VQOs	PR:	0.0	MM:	0.0	M:	25.9	P:	0.0	R:	0.0	
VAC Rating	Low:	0.0	Intermediate:	26.3	High:	6.0	Roadless:				0.0
Mass Movement Index	Low:	25.7	Medium:	6.6	High:	0.0	Very High:	0.0	Slopes Greater Than 72%:		0.0
Wetland Type	Short Sedge Meadow: 1.6										
TLMP High Value Marten Habitat	32.2										

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS: No Concerns

FISH/WATERSHED:

Class III HC6 south: Sideslope S&G buffer to form unit boundary.

GEOLOGY:

Unit is located in an area of low vulnerability karst. No specific karst features have been identified within this unit and the potential to find significant features is low. Resource damage potential associated with land management activities in the area is not likely to be any greater than those posed by similar activities on non-carbonate rock.

LANDS:

No concerns.

RECREATION/VISUALS:

No Concerns

SILVICULTURE:

Highly productive. Clearcut harvest 26 acres. Stand should regenerate naturally. Harvest deferred on 7 acres to meet Marten standards (see wildlife). CT 10/22/97

SOILS:

A small area of short sedge muskeg is located in the northwest corner of this harvest unit (BMP 12.5). There is no planned road construction on these wetlands (BMP 14.2).

TIMBER:

Planned logging systems design for this unit is Running Skyline and Slackline. Confirm final road and landing locations.

WILDLIFE:

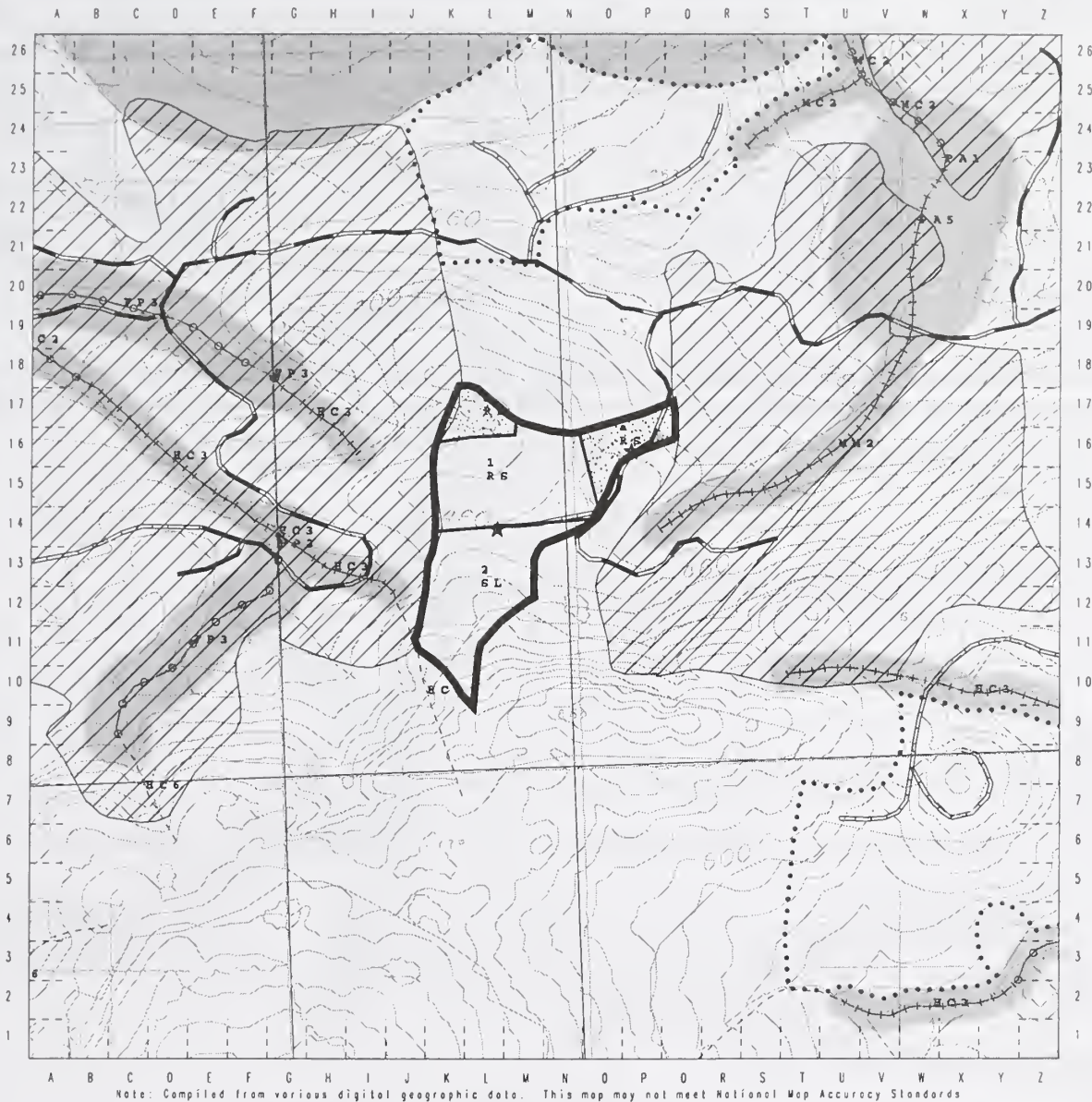
Marten guidelines apply: maintain 10-20% of canopy, average 4 large trees/acre (20-30"+), average 3 snags per acre, average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 174

Mapscale 1:12000 (5 inch to mile)

Created 11-17-1997, //s://files/ref/library/gis/sealevel/draftcard/draftcard.mxd



Note: Compiled from various digital geographic data. This map may not meet National Map Accuracy Standards

	Class 1 Stream		Stream, Beach or Estuary Buffer	Low Volume - 0
	Class 2 Stream		Private Land	Medium Volume - 0
	Class 3 Stream		Riparian Soil Buffer	High Volume - 25
	Section Line		Body of Water	Unknown Volume - 0
	Planning Roads		Prior Harvest	Total Acres - 32
	Unit Boundary		Deferred from Harvest	Potential MBI - 885
	Settling Line		Mass Movement Index 4 Soil	Quarter Quad - knabls
	Contour or Ortho line			VCU Number - 7530
	Other Sealevel			Photo Number - 1390049
				Alternative Pattern - 20000
				* Landing

LOGGING SYSTEMS Abbrev.

RS Running Skyline
HE Helicopter
HL High Lead
SL Sloak Line
SH Shovel Yarding

Projection - Stateplane



Eagle Nest



Unit Data Card - Sea Level Draft EIS

Unit Number:	175	Planned Acres:	36.0	Silvicultural Systems:	CC, DEF	In Alternative:	2
LUD:	TP	Harvest Acres:	25.8	Quad:	ktnb5se	Photo:	1390-8
Primary Watershed Code:	E77A	Primary WAA Number:	405	Management Area:	K35	VCU Number:	7530
Number of Settings:	5	Logging System:	RS	Total Estimated Harvest Volume (MBF):		675.3	

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	32.6	Cedar:	0.0	Mixed Hem/Spr:	0.8	Nonforested:	2.6
Site Productivity Classes	Low:	0.5	Medium:	0.0	High:	35.5	Primary Aspect:			W
Volume Strata	Low:	0.5	Medium:	21.1	High:	11.8	Noncommercial:	2.6		
Visuals	Seen:	9.6	Not Seen:	16.2	Primary ROS Code:					RM
VQOs	PR:	0.0	MM:	25.8	M:	0.0	P:	0.0	R:	0.0
VAC Rating	Low:	6.9	Intermediate:	0.0	High:	29.1	Roadless:			25.8
Mass Movement Index	Low:	0.0	Medium:	0.8	High:	35.2	Very High:	0.0	Slopes Greater Than 72%:	0.0
Wetland Information	Forested Wetland:		18.6							
TLMP High Value Marten Habitat	12.0									

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS:

No Concerns

FISH/WATERSHED:

Class I LC1 west: Greater of 150 foot or RMA (top of sideslope) buffer required.

Class III HC6 center to west: Sideslope S&G (top of V-notch) buffer, split yard or full suspension required.

GEOLOGY:

High landslide potential (MMI=3). See Soils for mitigation measures.

LANDS:

No concerns.

RECREATION/VISUALS:

No Concerns; the upper portions of this unit will be visible from the Mountain Point residential area on Revilla Island

SILVICULTURE:

Highly productive. Clearcut harvest 26 acres. Stand should regenerate naturally. Harvest deferred on 10 acres to meet Marten standards (see wildlife). CT 10/22/97

SOILS:

The entire harvest unit consists of high landslide potential (MMI=3) soils (BMP 13.5). The unit also contains over 18 acres of forested wetlands (BMP 12.5). Use a low impact logging system which provides at least partial log suspension when yarding these potentially unstable slopes (BMP 13.9) and forested wetlands. Roads on these steep, potentially unstable slopes may require full-bench design (BMP 14.7). Minimize the amount of fill slopes and limit blasting for road construction and rock pit development when the soil is saturated (BMP 14.6).

TIMBER:

Planned logging systems design for this unit is Running Skyline. Confirm final road and landing locations.

WILDLIFE:

Marten guidelines apply: maintain 10-20% of canopy, average 4 large trees/acre (20-30"+), average 3 snags per acre, average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 175

Map scale 1:12000 (5 inch to mile)

Created 11-17-1997, //sf/files/ref/library/gis/sealevel5/draftcard/draftcard.mxd



Note: Compiled from various digital geographic data. This map may not meet National Map Accuracy Standards

	Class 1 Stream		Stream, Beach or Estuary Buffer
	Class 2 Stream		Private Land
	Class 3 Stream		Riparian Soil Buffer
	Section Line		Body of Water
	Planning Roads		Prior Harvest
	Unit Boundary		Deferred from Harvest
	Setting Line		Mass Movement Index 4 Soil
	Contour or Ortho line		
	Other Sealevel		

Low Volume - 1
 Medium Volume - 18
 High Volume - 8
 Unknown Volume - 0
 Total Acres - 36
 Potential MBF - 734
 Quarter Quad - klob5se
 VCU Number - 7530
 Photo Number - 1390008
 Alternative Pattern - 20000
 ★ Landing

LOGGING SYSTEMS Abbrev.

RS Running Skyline
 HE Helicopter
 HL High Lead
 SL Stack Line
 SH Shovel Yarding

Projection - Stateplane



Eagle Nest



Unit Data Card - Sea Level Draft EIS

Unit Number:	176	Planned Acres:	45.4	Silvicultural Systems:	CC, DEF	In Alternative:	2
LUD:	TP	Harvest Acres:	39.1	Management Area:	K35	VCU Number:	7530
Primary Watershed Code:	E77A	Primary WAA Number:	405	Quad:	ktnb5se	Photo:	1390-8
Number of Settings:	6	Logging Systems:	RS, SH	Total Estimated Harvest Volume (MBF):		970.5	

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	0.0	Cedar:	45.4	Mixed Hem/Spr:	0.0	Non forested:	0.0	
Site Productivity Classes	Low:	0.0	Medium:	0.0	High:	45.4	Primary Aspect:				S
Volume Strata	Low:	0.0	Medium:	45.4	High:	0.0	Non Commercial:	0.0			
Visuals	Seen:	35.3	Not Seen:	3.8	Primary ROS Code:						RM
VQOs	PR:	0.0	MM:	39.1	M:	0.0	P:	0.0	R:	0.0	
VAC Rating	Low:	24.9	Intermediate:	0.0	High:	20.4	Roadless:				39.1
Mass Movement Index	Low:	0.0	Medium:	3.5	High:	41.9	Very High:	0.0	Slopes Greater Than 72%:	0.8	
Wetland Type			Forested Wetland:	15.7							
TLMP High Value Marten Habitat	0.0										

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS:

No Concerns

FISH/WATERSHED:

Class I MM1 south: Greater of 120 foot or RMA buffer required.

Class III HC2 southeast: Sideslope S&G buffer (top of V-notch) to form unit boundary.

Class III HC3 southeast: Sideslope S&G buffer (top of V-notch) to form unit boundary.

GEOLOGY:

High landslide potential areas in the upper part of this unit. See Soils for mitigation measures.

LANDS:

No concerns.

RECREATION/VISUALS:

No Concerns; the upper two-thirds of this unit will be visible from the Mountain Point residential area on Revilla Island.

SILVICULTURE:

Highly productive. Clearcut harvest 39 acres. Stand should regenerate naturally. Harvest deferred on 6 acres for wildlife concerns. CT 10/22/97

SOILS:

The upper part of this unit consists of high landslide potential (MMI=3) soils (BMP 13.5). The lower slopes are made up of forested wetlands (BMP 12.5). Recommend the use of a low impact logging system on these steep slopes and wetlands to minimize ground disturbance and provide at least partial log suspension when yarding (BMP 13.9). Roads have been located to avoid steep, potentially unstable slopes (BMP 14.2). Use overlay road construction and minimize side ditching, where practical, to minimize the effects upon ground-water flows (BMP 14.3).

TIMBER:

Planned logging systems design for this unit is Running Skyline and Shovel. Confirm final road and landing locations.

WILDLIFE:

No wildlife mitigation anticipated for this unit.

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 176

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, /baf/ra/ra/library/gis/sealevel/draftcard/draftcard.mxd



Unit Data Card - Sea Level Draft EIS

Unit Number:	200	Planned Acres:	12.0	Silvicultural Systems:	CC, DEF	In Alternative:	none
LUD:	SV	Harvest Acres:	7.9	Management Area:	K35	VCU Number:	7460
Primary Watershed Code:	E77A	Primary WAA Number:	405	Quad:	ktnb5se	Photo:	1390-23
Number of Settings:	3	Logging System:	RS	Total Estimated Harvest Volume (MBF):	344.5		

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	12.0	Cedar:	0.0	Mixed Hem/Spr:	0.0	Nonforested:	0.0		
Site Productivity Classes	Low:	0.0	Medium:	8.2	High:	3.8	Primary Aspect:				E	
Volume Strata	Low:	0.0	Medium:	0.0	High:	12.0	Noncommercial:	0.0	Primary ROS Code:		RM	
Visuals	Seen:	7.9	Not Seen:	0.0	R:							7.9
VQOs	PR:	0.0	MM:	0.0	M:	0.0	P:	0.0	Roadless:		0.0	
VAC Rating	Low:	10.1	Intermediate:	1.9	High:	0.0	Slopes Greater Than 72%:				1.0	
Mass Movement Index	Low:	0.0	Medium:	3.8	High:	8.2	Very High:	0.0	Wetland Type		None	
TLMP High Value Marten Habitat		12.0										

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS:

No Concerns

FISH/WATERSHED:

No Concerns

GEOLOGY:

LANDS:

RECREATION/VISUALS:

This unit would not meet the Retention VQO for a Scenic Viewshed LUD due to its proposed large size on very steep slopes directly facing the viewer in a foreground distance (less than 1/4-mile). Patch cuts smaller than one acre or complete ITM treatment may mitigate this impact.

SILVICULTURE:

Moderately productive. Use small patch cuts to harvest 8 acres. Leave approximately 4 acres unharvested to meet Marten standards (see wildlife). Patches should regenerate naturally. CT 10/21/97

SOILS:

TIMBER:

Planned logging systems design for this unit is Running Skyline. Confirm final road and landing locations.

WILDLIFE:

Marten guidelines apply: maintain 10-20% of canopy, average 4 large trees/acre (20-30"+), average 3 snags per acre, average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 200

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, //s:\files\rel\library\gis\sealevel\draftcard\draftcard.mxd



Note: Compiled from various digital geographic data. This map may not meet National Map Accuracy Standards



Unit Data Card - Sea Level Draft EIS

Unit Number:	201	Planned Acres:	15.3	Silvicultural System:	CC	In Alternative:	none
LUD:	SV	Harvest Acres:	15.3	Management Area:	K35	VCU Number:	7460
Primary Watershed Code:	E77A	Primary WAA Number:	405	Quad:	ktnb5se	Photo:	1390-23
Number of Settings:	1	Logging System:	RS	Total Estimated Harvest Volume (MBF):		577.9	

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	15.3	Cedar:	0.0	Mixed Hem/Spr:	0.0	Nonforested:	0.0	
Site Productivity Classes	Low:	0.0	Medium:	15.3	High:	0.0	Primary Aspect:				N
Volume Strata	Low:	0.0	Medium:	0.6	High:	14.6	Noncommercial:	0.1			
Visuals	Seen:	15.3	Not Seen:	0.0					Primary ROS Code:	RM	
VQOs	PR:	1.0	MM:	0.0	M:	0.0	P:	0.0	R:	14.3	
VAC Rating	Low:	15.3	Intermediate:	0.0	High:	0.0	Roadless:				0.0
Mass Movement Index	Low:	0.6	Medium:	14.6	High:	0.0	Very High:	0.0	Slopes Greater Than 72%:	0.0	
Wetland Type	Forested Wetland:		0.5	Scrub-Shrub Muskeg:		0.2					
TLMP High Value Marten Habitat	14.3										

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS:

No concerns.

FISH/WATERSHED:

No concerns.

GEOLOGY:

LANDS:

RECREATION/VISUALS:

This unit would not meet the Retention VQO for foreground distances (less than ¼ mile); it may be mitigated through use of one-acre or smaller patch clearcuts or ITM treatments.

SILVICULTURE:

Moderately productive. Clearcut harvest 15.3 acres. Stand should regenerate naturally. CT 10/22/97

SOILS:

TIMBER:

Planned logging systems design for this unit is Running Skyline. Confirm final road and landing locations.

WILDLIFE:

Marten guidelines apply: maintain 10-20% of canopy, average 4 large trees/acre (20-30"+), average 3 snags per acre, average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 201

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, J:\files\raf\library\gis\sealevel\draft\sealevel\draftcard.draftcard.mxd



Unit Data Card - Sea Level Draft EIS

Unit Number:	203	Planned Acres:	85.7	Silvicultural Systems:	CC, DEF	In Alternative:	2
LUD:	SV	Harvest Acres:	53.2	Management Area:	K35	VCU Number:	7460
Primary Watershed Code:	E77A	Primary WAA Number:	405	Quad:	ktmb5se	Photo:	1390-183
Number of Settings:	15	Logging Systems:	RS, LS	Total Estimated Harvest Volume (MBF):	1,708.9		

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	85.7	Cedar:	0.0	Mixed Hem/Spr:	0.0	Nonforested:	0.0
Site Productivity Classes	Low:	0.0	Medium:	85.7	High:	0.0	Primary Aspect: WNW			
Volume Strata	Low:	0.4	Medium:	13.9	High:	71.4	Noncommercial:	0.0		
Visuals	Seen:	49.4	Not Seen:	3.8	Primary ROS Code: RM					
VQOs	PR:	21.9	MM:	3.8	M:	0.0	P:	0.0	R:	27.5
VAC Rating	Low:	56.3	Intermediate:	28.2	High:	1.2	Roadless: 0.0			
Mass Movement Index	Low:	4.4	Medium:	0.0	High:	81.4	Very High:	0.0	Slopes Greater Than 72%:	12.7
Wetland Information	Forested Wetland:			10.7	Scrub-Shrub Muskeg:			0.1		
TLMP High Value Marten Habitat	13.0									

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS:

No Concerns

FISH/WATERSHED:

Class III HC5 north: Sideslope S&G buffer (top of V-notch) to form unit boundary.

Class III HC6 (2 each) center to north: Sideslope S&G buffer (top of V-notch), split yard or full suspension required.

GEOLOGY:

High landslide potential. See Soils for mitigation measures.

LANDS:

No concerns.

RECREATION/VISUALS:

No Concerns; although large in size (plan view), it is located on a nearby ridge top, from the perspective view very little of this unit would be visible due to vegetation screening. WEA

SILVICULTURE:

Moderately productive. Clearcut harvest 53 acres. Stand should regenerate naturally. Harvest deferred on 32 acres to meet Marten standards (see wildlife). CT 10/22/97

SOILS:

Much of this harvest unit consists of high landslide potential (MMI=3) soils (BMP 13.5). The upper part of this unit includes areas of forested wetland (BMP 12.5). Use a low impact logging system on these steep slopes and wetlands which minimizes ground disturbance and provides at least partial log suspension when yarding (BMP 13.9). Road construction on these steep, potentially unstable slopes may require full-bench design (BMP 14.7). Avoid placing fill on high landslide potential slopes (BMP 14.7). Limit blasting for road construction when the soil is saturated (BMP 14.6). Use overlay road construction on wetlands and minimize side ditching, where practical, to minimize the effects upon groundwater flow (BMP 14.3). This unit contains 12.7 acres of slopes greater than 72 percent. 9.9 acres of these steep slopes were determined following an on-site analysis of these slopes by the IDT soil scientist to have a minimal risk of potential impacts of accelerated erosion on down-slope and down-stream fish habitat, other beneficial uses of water and other resources. These slopes are included within the timber harvest unit (BMP 13.2). The rest of these steep slopes were placed in deferral areas (BMP 13.5).

TIMBER:

Planned logging systems design for this unit is Running Skyline and Live Skyline. Confirm final road and landing locations.

WILDLIFE:

Marten guidelines apply: maintain 10-20% of canopy, average 4 large trees/acre (20-30"+), average 3 snags per acre, average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 203

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, /jalicea/rel/library/gis/sealevel/draftcard/draftcard.amf



Note: Compiled from various digital geographic data. This map may not meet National Map Accuracy Standards

	Class 1 Stream		Stream, Beach or Estuary Buffer
	Class 2 Stream		Private Land
	Class 3 Stream		Riparian Soil Buffer
	Section Line		Body of Water
	Planning Road		Prior Harvest
	Unit Boundary		Deferred from Harvest
	Settling Line		Mass Movement Index 4 Soil
	Contour or Ortho line		
	Other Sealevel		

Low Volume - 0
 Medium Volume - 9
 High Volume - 45
 Unknown Volume - 0
 Total Acres - 86
 Potential MBF - 1784
 Quarter Acre - 44555
 VCU Number - 7460
 Photo Number - 1390183
 Alternative Pattern - 20000
 * Loading

LOGGING SYSTEMS Abbrev.

RS Running Skyline
 HE Helicopter
 HL High Load
 SL Stock Line
 SH Shovel Yarding

Projection - Stolephone



Eagle Nest



Unit Data Card - Sea Level Draft EIS

Unit Number:	204	Planned Acres:	14.5	Silvicultural Systems:	CC, DEF	In Alternative:	none
LUD:	SV	Harvest Acres:	11.9	Management Area:	K35	VCU Number:	7460
Primary Watershed Code:	E77A	Primary WAA Number:	405	Quad:	ktnc5sc	Photo:	1390-183
Number of Settings:	4	Logging System:	RS	Total Estimated Harvest Volume (MBF):	467.2		

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	14.5	Cedar:	0.0	Mixed Hem/Spr:	0.0	Nonforested:	0.0		
Site Productivity Classes	Low:	0.0	Medium:	13.9	High:	0.6	Primary Aspect:				E	
Volume Strata	Low:	0.0	Medium:	13.8	High:	0.7	Noncommercial:	0.0	Primary ROS Code:		RM	
Visuals	Seen:	14.5	Not Seen:	0.0	R:							0.0
VQOs	PR:	0.0	MM:	0.0	M:	0.0	P:	0.0	Roadless:		0.0	
VAC Rating	Low:	14.5	Intermediate:	0.0	High:	0.0	Slopes Greater Than 72%:				0.1	
Mass Movement Index	Low:	1.2	Medium:	13.2	High:	0.1	Very High:	0.0	Wetland Type		Forested Wetland:	6.2
TLMP High Value Marten Habitat	1.0											

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS:

No Concerns

FISH/WATERSHED:

No Concerns

GEOLOGY:

LANDS:

RECREATION/VISUALS:

SILVICULTURE:

Moderate productivity. Clearcut harvest 12 acres. Stand should regenerate naturally. Harvest deferred on 2.5 acres to meet Marten standards (see wildlife). CT 10/22/97

SOILS:

TIMBER:

Planned logging systems design for this unit is Running Skyline. Confirm final road and landing locations.

WILDLIFE:

No wildlife mitigation anticipated for this unit.

Marten guidelines apply: maintain 10-20% of canopy, average 4 large trees/acre (20-30"+), average 3 snags per acre, average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

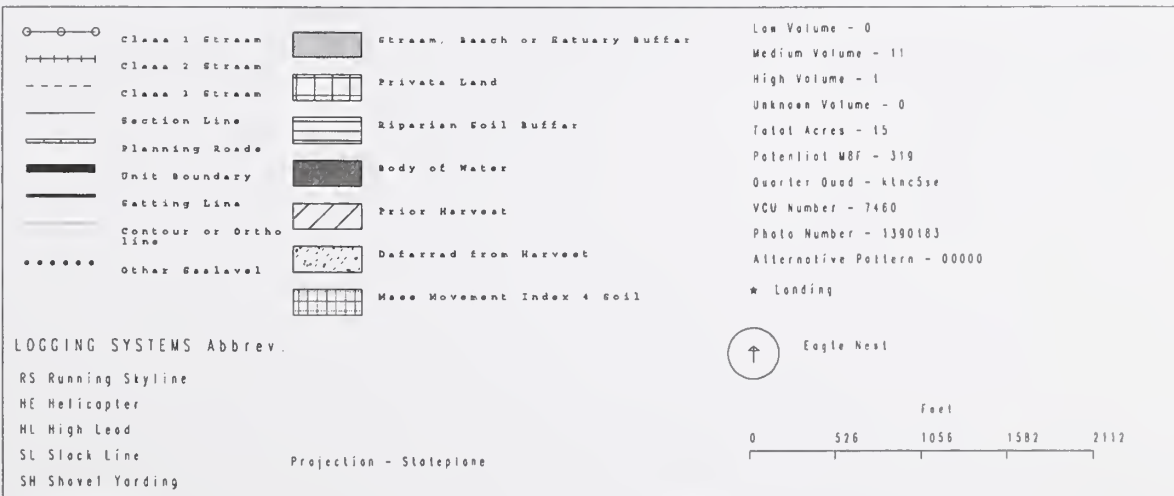
Sealevel Study Area Unit Schematic - Draft Unit 204

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, /s:/files/ent/lib/brg/gis/sealer5/draftcard/draftcard.mxd



Note: Compiled from various digital geographic data. This map may not meet National Map Accuracy Standards



Unit Data Card - Sea Level Draft EIS

Unit Number:	205	Planned Acres:	50.7	Silvicultural Systems:	ITM, DEF	In Alternative:	none
LUD:	SV	Harvest Acres:	22.9	Management Area:	K35	VCU Number:	7460
Primary Watershed Code:	E77A	Primary WAA Number:	405	Quad:	ktnc5se	Photo:	2730-95
Number of Settings:	14	Logging System:	HE	Total Estimated Harvest Volume (MBF):		568.6	

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	50.7	Cedar:	0.0	Mixed Hem/Spr:	0.0	Nonforested:	0.0	
Site Productivity Classes	Low:	0.0	Medium:	50.7	High:	0.0	Primary Aspect:				E
Volume Strata	Low:	4.2	Medium:	46.5	High:	0.0	Noncommercial:	0.0			
Visuals	Seen:	50.7	Not Seen:	0.0	Primary ROS Code:						RM
VQOs	PR:	0.0	MM:	0.0	M:	0.0	P:	0.0	R:	0.0	
VAC Rating	Low:	49.6	Intermediate:	1.1	High:	0.0	Roadless:				0.0
Mass Movement Index	Low:	4.2	Medium:	0.0	High:	46.5	Very High:	0.0	Slopes Greater Than 72%:	11.1	
Wetland Type	Forested Wetland:		30.6	Scrub-Shrub Muskeg:		0.1					
TLMP High Value Marten Habitat	0.0										

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS:

No concerns.

FISH/WATERSHED:

No concerns.

GEOLOGY:

High landslide potential.

LANDS:

No concerns.

RECREATION/VISUALS:

SILVICULTURE:

Helicopter harvest 44.7 acres using a diameter limit prescription. Defer harvest on 6 acres. CT 10/21/97

SOILS:

Unit contains 11.1 acres of slopes greater than 72 percent. An on-site analysis of these slopes by the IDT soil scientist determined that the risk of potential impacts of accelerated erosion on down-slope and down-stream fish habitat, other beneficial uses of water and other resources was minimal and these slopes are included within the timber harvest unit (BMP 13.2).

TIMBER:

Planned logging systems design for this unit is helicopter.

WILDLIFE:

No wildlife mitigation anticipated for this unit.

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 205

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, J:\files\ref\1-brng\gis\sealev8\draftcard\draftcard.mxd



Note: Compiled from various digital geographic data. This map may not meet National Map Accuracy Standards



Unit Data Card - Sea Level Draft EIS

Unit Number:	209	Planned Acres:	14.5	Silvicultural Systems:	CC, DEF	In Alternatives:	2, 3, 4, 6
LUD:	TP	Harvest Acres:	11.1	Management Area:	K35	VCU Number:	7460
Primary Watershed Code:	E77A	Primary WAA Number:	405	Quad:	ktnc5sc	Photo:	1390-21
Number of Settings:	5	Logging System:	RS	Total Estimated Harvest Volume (MBF):		275.7	

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	14.4	Cedar:	0.0	Mixed Hcm/Spr:	0.1	Nonforested:	0.0							
Site Productivity Classes	Low:	1.1	Medium:	13.3	High:	0.0	Primary Aspect:				N						
Volume Strata	Low:	2.7	Medium:	11.7	High:	0.1	Noncommercial:	0.0	Primary ROS Code:			RM					
Visuals	Seen:	0.0	Not Seen:	11.9								R					
VQOs	PR:	0.0	MM:	11.9	M:	0.0	P:	0.0	Roadless:				0.0				
VAC Rating	Low:	0.0	Intermediate:	0.0	High:	14.5	Slopes Greater Than 72%:						0.8				
Mass Movement Index	Low:	2.9	Medium:	0.0	High:	11.8	Very High:	0.0									
Wetland Type	Forested Wetland:		14.3	Scrub-Shrub Muskeg:		0.2											
TLMP High Value Marten Habitat	0.0																

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS:

No Concerns

FISH/WATERSHED:

No concerns

GEOLOGY:

High landslide potential. See Soils for mitigation measures.

LANDS:

No concerns.

RECREATION/VISUALS:

No Concerns

SILVICULTURE:

Moderate productivity. Clearcut harvest 11 acres. The stand should regenerate naturally. Harvest deferred on 3.5 acres for organic wetland concerns. CT 10/22/97

SOILS:

The entire unit is made up of forested wetland and scrub-shrub muskeg (BMP 12.5). Much of this unit also is a high landslide potential (MMI=3) area (BMP 13.5). Use a low impact logging system which minimizes ground disturbance and provides at least partial log suspension when yarding (BMP 13.9) this unit. Use overlay road construction on wetlands and minimize side-ditching, where practical, to minimize the effects upon groundwater flows (BMP 14.3). Avoid the placement of fill and waste material on these wetlands (BMP 14.19). Access roads have been located to avoid steep, potentially unstable slopes (BMP 14.2). About an acre of this unit consist of slopes greater than 72 percent. An on-site analysis of these slopes by the IDT soil scientist determined that the risk of potential impacts of accelerated erosion on down-slope and down-stream fish habitat, other beneficial uses of water and other resources was minimal and these slopes are included within the timber harvest unit (BMP 13.2).

TIMBER:

Planned logging systems design for this unit is running skyline. Confirm final road and landing locations.

WILDLIFE:

Sensitive plant SW of unit. Avoid sensitive plant during temporary road construction.

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 209

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, /atlina/ret/library/gis/sealevel/draftcard/draftcard.mxd



Note: Compiled from various digital geographic data. This map may not meet National Map Accuracy Standards



Unit Data Card - Sea Level Draft EIS

Unit Number:	210	Planned Acres:	41.4	Silvicultural Systems:	CC, DEF	In Alternatives:	2, 3, 4, 6
LUD:	TP	Harvest Acres:	36.3	Management Area:	K35	VCU Number:	7460
Primary Watershed Code:	E77A	Primary WAA Number:	405	Quad:	ktnc5se	Photo:	2730-116
Number of Settings:	11	Logging System:	RS	Total Estimated Harvest Volume (MBF):		1,080.0	

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	41.4	Cedar:	0.0	Mixed Hem/Spr:	0.0	Nonforested:	0.0			
Site Productivity Classes	Low:	1.3	Medium:	40.1	High:	0.0	Primary Aspect:				W		
Volume Strata	Low:	0.0	Medium:	0.1	High:	36.2	Noncommercial:	0.0	Primary ROS Code:			RM	
Visuals	Seen:	0.0	Not Seen:	36.3								R	
VQOs	PR:	0.0	MM:	36.3	M:	0.0	P:	0.0	Roadless:				0.0
VAC Rating	Low:	0.0	Intermediate:	0.0	High:	41.4						Slopes Greater Than 72%:	4.9
Mass Movement Index	Low:	1.5	Medium:	0.0	High:	39.9	Very High:	0.0					
Wetland Information	Forested Wetland:			41.4	Scrub-Shrub Muskeg:			0.1	TLMP High Value Marten Habitat				40.4

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO 1/2/96

ENGINEERING/ROADS:

No Concerns

FISH/WATERSHED:

Class I LC1 west: Greater of 150 foot or RMA (top of sideslope) buffer required.

Class I lake southwest: Greater of 100 foot or RMA buffer required.

Class I PA2 southwest: Greater of 100 foot or RMA buffer required

GEOLOGY:

High landslide potential. See Soils for mitigation measures.

LANDS:

No concerns.

RECREATION/VISUALS:

No concerns.

SILVICULTURE:

Moderately low productivity. Clearcut harvest 36 acres. Stand should regenerate naturally. Harvest deferred on 6 acres to meet Marten standards (see wildlife).

This stand has Sensitive Plant concerns, plants are located along road leading to the unit, some slight realignment will be needed, see resource report. CT

10/22/97

SOILS:

The entire unit consists of forested wetland and scrub-shrub muskeg (BMP 12.5). Use a low impact logging system which minimizes ground disturbance and provides at least partial log suspension when yarding (BMP 13.9) on wetland's and high landslide potential slopes. This unit contains 4.9 acres of greater than 72 percent slopes. These slopes were placed in deferral areas. Roads have been located to avoid steep, potentially unstable slopes (BMP 14.2).

TIMBER:

Planned logging systems design for this unit is running skyline. Confirm final road and landing locations.

WILDLIFE:

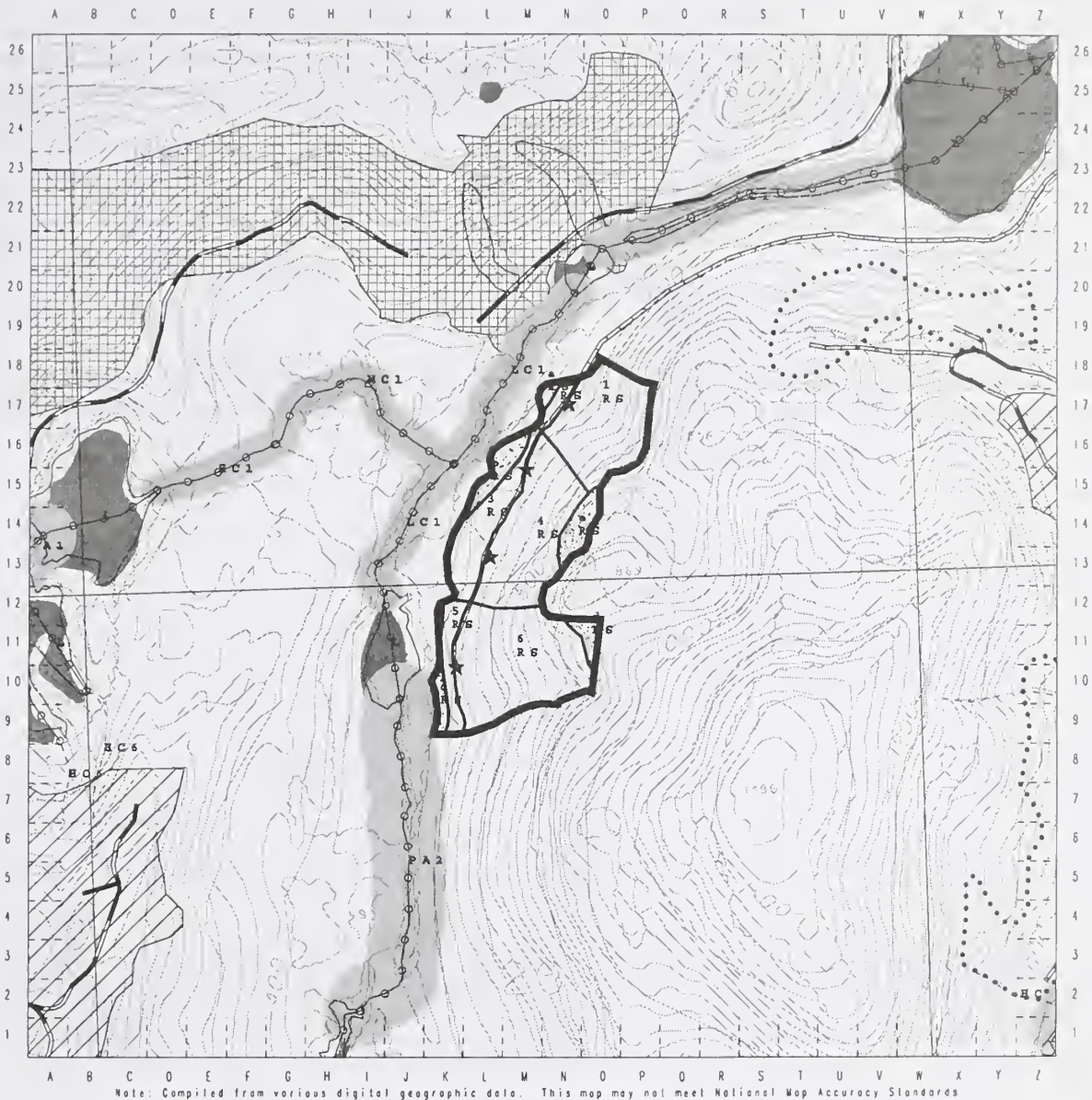
Marten guidelines apply: maintain 10-20% of canopy, average 4 large trees/acre (20-30"+), average 3 snags per acre, average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 210

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, //files/ref/library/gis/sealevel/draftcard/draftcard.dml



	Class 1 Stream		Stream, Beach or Estuary Buffer
	Class 2 Stream		Private Land
	Class 3 Stream		Riparian Soil Buffer
	Section Line		Body of Water
	Planning Road		Prior Harvest
	Unit Boundary		Deferred from Harvest
	Setting Line		Mass Movement Index 4 Soil
	Contour or Ortho line		
	Other Sealevel		

Low Volume - 0
 Medium Volume - 0
 High Volume - 36
 Unknown Volume - 0
 Total Acres - 41
 Potential MBF - 1268
 Quarter Oad - kinc5se
 VCU Number - 7460
 Photo Number - 2730116
 Alternative Pattern - 23406
 * Landing

LOGGING SYSTEMS Abbrev.

RS Running Skyline
 HE Helicopter
 HL High Lead
 SL Slack Line
 SH Shovel Yarding

Projection - Stateplane



Eagle Nest



Unit Data Card - Sea Level Draft EIS

Unit Number:	213	Planned Acres:	23.1	Silvicultural Systems:	CC, DEF	In Alternatives:	2, 3, 4, 5, 6
LUD:	ML	Harvest Acres:	21.8	Management Area:	K35	VCU Number:	7460
Primary Watershed Code:	E77A	Primary WAA Number:	405	Quad:	ktnc5se	Photo:	1390-21
Number of Settings:	6	Logging System:	RS	Total Estimated Harvest Volume (MBF):	541.1		

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	23.1	Cedar:	0.0	Mixed Hem/Spr:	0.0	Nonforested:		0.0	
Site Productivity Classes	Low:	1.7	Medium:	21.4	High:	0.0	Primary Aspect:					E
Volume Strata	Low:	1.7	Medium:	21.4	High:	0.0	Noncommercial:	0.0	Primary ROS Code:			RM
Visuals	Seen:	0.0	Not Seen:	23.8								
VQOs	PR:	0.0	MM:	23.8	M:	0.0	P:	0.0	R:			0.0
VAC Rating	Low:	0.0	Intermediate:	0.0	High:	23.1	Roadless:					21.8
Mass Movement Index	Low:	1.7	Medium:	0.0	High:	21.4	Very High:	0.0	Slopes Greater Than 72%:			0.9
Wetland Type	Forested Wetland:		20.6									
TLMP High Value Marten Habitat	0.0											

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS:

No Concerns

FISH/WATERSHED:

Class II (non-direct) FP3 east: Greater of 130 foot or floodplain RMA buffer required.

Class III HC6 north: Sideslope S&G buffer (top of V-notch), split yard or full suspension required..

Class III HC5 south: Sideslope S&G buffer to form unit boundary.

GEOLOGY:

High landslide potential. See Soils for mitigation measures.

LANDS:

No concerns.

RECREATION/VISUALS:

No Concerns

SILVICULTURE:

Moderately low productivity. Clearcut harvest 22 acres. Stand should regenerate naturally. Harvest deferred on 2 acres for organic wetland concerns. CT 10/22/97

SOILS:

This unit is made up of high landslide potential (MMI=3) soils (BMP 13.5). Much of this unit also consists of forested wetlands (BMP 12.5). Recommend the use of low impact logging systems which minimize ground disturbance and provide at least partial log suspension when yarding (BMP 13.9). Roads on these steep, potentially unstable slopes may require full-bench design (BMP 14.7). Minimize the amount of fill slopes on these potentially unstable areas. Limit blasting for road construction when the soil is saturated (BMP 14.6). About an acre of this unit consist of slopes greater than 72 percent. An on-site analysis of these slopes by the IDT soil scientist determined that the risk of potential impacts of accelerated erosion on down-slope and down-stream fish habitat, other beneficial uses of water and other resources was minimal and these slopes are included within the timber harvest unit (BMP 13.2).

TIMBER:

Planned logging systems design for this unit is Running Skyline. Confirm final road and landing locations.

WILDLIFE:

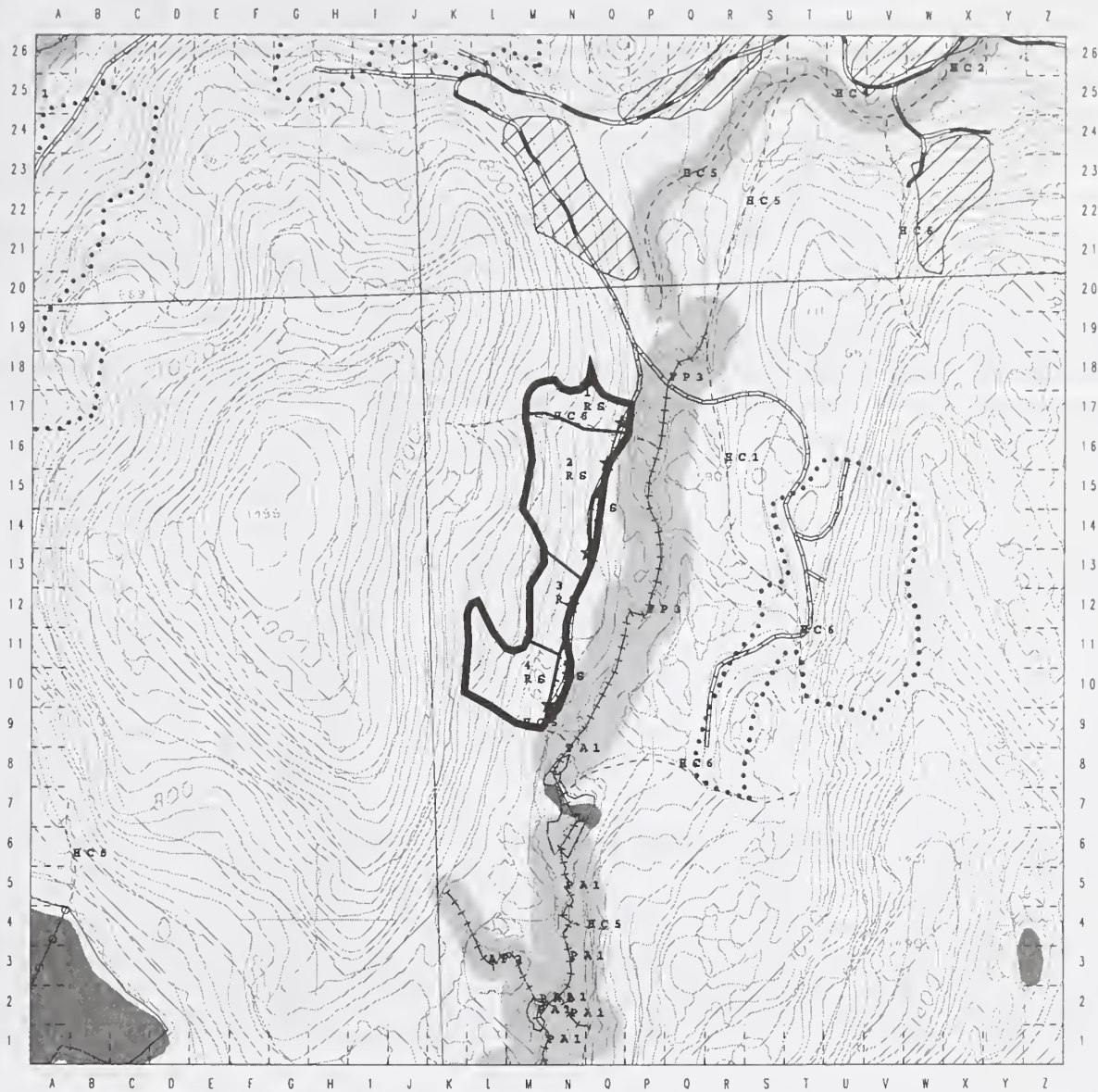
No wildlife mitigation anticipated for this unit.

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 213

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, //efiles/ref/library/gis/sealevel/draftcard4/draftcard.ami



Note: Compiled from various digital geographic data. This map may not meet National Map Accuracy Standards

- | | | | |
|--|-----------------------|--|---------------------------------|
| | Class 1 Stream | | Stream, Beach or Estuary Buffer |
| | Class 2 Stream | | Private Land |
| | Class 3 Stream | | Riparian Soil Buffer |
| | Section Line | | Body of Water |
| | Planning Road | | Prior Harvest |
| | Unit Boundary | | Deferred from Harvest |
| | Setting Line | | Mass Movement Index 4 Soil |
| | Contour or Ortho line | | |
| | Other Sealevel | | |

- Low Volume - 1
 Medium Volume - 21
 High Volume - 0
 Unknown Volume - 0
 Total Acres - 23
 Potential MBF - 566
 Quarter Quad - kmc5se
 VCU Number - 7460
 Photo Number - 1390021
 Alternative Pattern - 23456
 * Logging

LOGGING SYSTEMS Abbrev.

RS Running Skyline
 HE Helicopter
 HL High Lead
 SL Slack Line
 SH Shovel Yarding

Projection - Stateplane



Eagle Nest



Unit Data Card - Sea Level Draft EIS

Unit Number:	214	Planned Acres:	34.2	Silvicultural Systems:	CC, DEF	In Alternative:	2
LUD:	ML	Harvest Acres:	22.9	Management Area:	K35	VCU Number:	7460
Primary Watershed Code:	E77A	Primary WAA Number:	405	Quad:	ktnc5se	Photo:	1390-21
Number of Settings:	7	Logging Systems:	RS, SH	Total Estimated Harvest Volume (MBF):	683.7		

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	34.2	Cedar:	0.0	Mixed Hem/Spr:	0.0	Nonforested:	0.0	
Site Productivity Classes	Low:	0.1	Medium:	12.0	High:	22.0	Primary Aspect:				W
Volume Strata	Low:	0.0	Medium:	0.7	High:	33.5	Noncommercial:	0.0			
Visuals	Seen:	0.0	Not Seen:	22.9					Primary ROS Code:	RM	
VQOs	PR:	0.0	MM:	22.9	M:	0.0	P:	0.0	R:	0.0	
VAC Rating	Low:	0.0	Intermediate:	6.6	High:	27.5	Roadless:				22.9
Mass Movement Index	Low:	0.7	Medium:	0.0	High:	33.5	Very High:	0.0	Slopes Greater Than 72%:	12.5	
Wetland Type	Forested Wetlands:			5.5	Scrub-Shrub Muskeg:			2.8			
TLMP High Value Marten Habitat	33.2										

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS:

No Concerns

FISH/WATERSHED:

Class III HC6 center to west: Sideslope S&G buffer (top of V-notch), split yard or full suspension.

Class III HC6 south: Sideslope S&G buffer (top of V-notch), to form unit boundary.

GEOLOGY:

High landslide potential. See Soils for mitigation measures.

LANDS:

No concerns.

RECREATION/VISUALS:

No Concerns

SILVICULTURE:

Moderately high productivity. Clearcut harvest 23 acres. Stand should regenerate naturally. Harvest deferred on 11 acres to meet Marten standards (see wildlife). CT 10/22/97

SOILS:

Unit is made up mostly of high landslide potential (MMI=3) soils (BMP 13.5). The unit also contains some forested wetlands and scrub-shrub muskeg wetlands (BMP 12.5). Use low impact logging systems on MMI=3 soils and forested wetlands (BMP 13.9). Access roads have been planned to avoid wetland areas (BMP 14.2). Roads on steep, potentially unstable slopes may require full-bench design (BMP 14.7). Avoid placing fill on wetlands and steep, potentially unstable slopes (BMPs 14.7 and 14.19). Limit blasting for road construction and rock pit development when the soil is saturated (BMP 14.6). Unit contains 12.5 acres of slopes greater than 72%. 2.8 acres were placed in deferral areas (BMP 13.5). The other 9.7 acres were determined following an on-site analysis of these slopes by the IDT soil scientist to pose a minimal risk of potential impacts of accelerated erosion on down-slope and down-stream fish habitat, other beneficial uses of water and other resources. These slopes are included within the timber harvest unit (BMP 13.2).

TIMBER:

Planned logging systems design for this unit is Running Skyline and Shovel. Confirm final road and landing locations. Verify feasibility of split yarding or full suspension of Class III stream within unit and adjust roads, landings, or modify unit boundary if required.

WILDLIFE:

Marten guidelines apply: maintain 10-20% of canopy, average 4 large trees/acre (20-30"+), average 3 snags per acre, average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 214

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, /full/ea/ra/1-brary/gis/sealevel/draftcard/draftcard.mxd



Note: Compiled from various digital geographic data. This map may not meet National Map Accuracy Standards



Unit Data Card - Sea Level Draft EIS

Unit Number:	215	Planned Acres:	17.3	Silvicultural Systems:	CC, DEF	In Alternatives:	2, 3, 4, 6
LUD:	TP	Harvest Acres:	15	Management Area:	K35	VCU Number:	7460
Primary Watershed Code:	E77A	Primary WAA Number:	405	Quad:	ktnc5se	Photo:	1390-20
Number of Settings:	2	Logging System:	RS	Total Estimated Harvest Volume (MBF):	447.6		

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	17.3	Cedar:	0.0	Mixed Hem/Spr:	0.0	Nonforested:	0.0	
Site Productivity Classes	Low:	1.2	Medium:	16.2	High:	0.0	Primary Aspect: WSW				
Volume Strata	Low:	0.0	Medium:	1.1	High:	16.2	Noncommercial:	0.0	Primary ROS Code: SPNM		
Visuals	Seen:	0.0	Not Seen:	15.0							
VQOs	PR:	0.0	MM:	15.0	M:	0.0	P:	0.0	R:	0.0	
VAC Rating	Low:	0.0	Intermediate:	0.0	High:	17.3	Roadless:				15
Mass Movement Index	Low:	1.2	Medium:	0.0	High:	16.2	Very High:	0.0	Slopes Greater Than 72%:	2.7	
Wetland Type	Scrub-Shrub		Muskeg:	2.0							
TLMP High Value Marten Habitat	16.3										

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS:

No Concerns

FISH/WATERSHED:

No concerns.

GEOLOGY:

A high landslide potential (MMI=3) unit. See Soils for mitigation measures.

LANDS:

No concerns.

RECREATION/VISUALS:

No Concerns

SILVICULTURE:

Moderately low productivity. Clearcut harvest 15 acres. Plant 2 acres of Alaska yellowcedar the remainder of the stand should regenerate naturally. Harvest deferred on 2 acres to meet Marten standards (see wildlife). CT 10/22/97

SOILS:

The upper part of this unit consists of high landslide potential (MMI=3) soils (BMP 13.5). Lower parts of this unit include areas of scrub-shrub muskeg wetland (BMP 12.5). Recommend the use of low impact logging systems which minimize ground disturbance on these sites and provide at least partial log suspension when yarding (BMP 13.9). Road access to this unit is planned through an area of scrub-shrub muskeg. Use overlay road construction and minimize side ditching, where practical, to minimize the effects upon ground-water flow (BMPs 12.5 and 14.3). This unit contains 2.7 acres of slopes greater than 72 percent. An on-site analysis of these slopes by the ID1 soil scientist determined that the risk of potential impacts of accelerated erosion on down-slope and down-stream fish habitat, other beneficial uses of water and other resources was minimal and these slopes are included within the timber harvest unit (BMP 13.2).

TIMBER:

Planned logging systems design for this unit is Running Skyline. Confirm final road and landing locations.

WILDLIFE:

Marten guidelines apply: maintain 10-20 percent of canopy, average 4 large trees/acre (20-30"+), average 3 snags per acre, average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 215

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, /data/reel/library/gis/sealevel/draftcard/draftcard.mxd



Note: Compiled from various digital geographic data. This map may not meet National Map Accuracy Standards



Unit Data Card - Sea Level Draft EIS

Unit Number:	216	Planned Acres:	20.8	Silvicultural Systems:	CC, DEF	In Alternatives:	2, 4
LUD:	ML	Harvest Acres:	16.6	Management Area:	K35	VCU Number:	7460
Primary Watershed Code:	E77A	Primary WAA Number:	405	Quad:	ktne5se	Photo:	1390-20
Number of Settings:	6	Logging System:	RS	Total Estimated Harvest Volume (MBF):		464.3	

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	20.8	Cedar:	0.0	Mixed Hem/Spr:	0.0	Nonforested:	0.0
Site Productivity Classes	Low:	0.0	Medium:	19.9	High:	0.9	Primary Aspect: NNE			
Volume Strata	Low:	3.3	Medium:	5.3	High:	12.3	Noncommercial:	0.0		
Visuals	Seen:	5.0	Not Seen:	11.6	Primary ROS Code: RM					
VQOs	PR:	5.0	MM:	11.6	M:	0.0	P:	0.0	R:	0.0
VAC Rating	Low:	6.8	Intermediate:	0.0	High:	14.1	Roadless: 0.0			
Mass Movement Index	Low:	20.8	Medium:	0.0	High:	0.0	Very High:	0.0	Slopes Greater Than 72%:	0.0
Wetland Type	Short Sedge Meadow:		0.3	Forested Wetland:			8.5			
TLMP High Value Marten Habitat	14.0									

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS:

No Concerns

FISH/WATERSHED:

Class I MC3 north to northwest: Greater of 100 foot or RMA (top of sideslope) buffer to form unit boundary.

Class II (direct) HC2 center: Greater of 100 foot or RMA (top of V-notch) to form unit boundary.

GEOLOGY:

No concerns.

LANDS:

No concerns.

RECREATION/VISUALS:

No Concerns

SILVICULTURE:

Moderately low productivity. Clearcut harvest 17 acres. Plant 2 acres with AYC the remainder of the stand should regenerate naturally. Harvest deferred on 4 acres to meet Marten standards (see wildlife). CT 10/22/97

SOILS:

The southern parts of this unit consist of forested wetlands (BMP 12.5). Use a low impact logging system on these wetlands which minimizes ground disturbance and provides at least partial log suspension when yarding (BMP 13.9). Use overlay road construction and minimize side ditching, where practical, to minimize the effects upon ground-water flow and alteration of wetness (BMPs 12.5 and 14.3).

TIMBER:

Planned logging systems design for this unit is running skyline. Confirm final landing locations.

WILDLIFE:

Marten guidelines apply: maintain 10-20 percent of canopy, average 4 large trees/acre (20-30"+), average 3 snags per acre, average 3 pieces downed logs per acre (20-30"+).

Maintain 1000 foot beach buffer.

Unit Data Card - Sea Level Draft EIS

Unit Number:	217	Planned Acres:	25.7	Silvicultural Systems:	CC, DEF	In Alternative:	2
LUD:	ML	Harvest Acres:	24.7	Management Area:	K35	VCU Number:	7460
Primary Watershed Code:	E77A	Primary WAA Number:	405	Quad:	ktnc5se	Photo:	1390-20
Number of Settings:	4	Logging Systems:	RS, LS	Total Estimated Harvest Volume (MBF):	656.9		

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	25.7	Cedar:	0.0	Mixed Hem/Spr:	0.0	Nonforested:	0.0
Site Productivity Classes	Low:	0.0	Medium:	25.7	High:	0.0	Primary Aspect:			E
Volume Strata	Low:	2.7	Medium:	14.3	High:	8.8	Noncommercial:	0.0		
Visuals	Seen:	21.4	Not Seen:	3.4				Primary ROS Code: RM		
VQOs	PR:	12.2	MM:	2.8	M:	9.7	P:	0.0	R:	0.0
VAC Rating	Low:	8.4	Intermediate:	6.2	High:	11.1	Roadless:			0.0
Mass Movement Index	Low:	16.3	Medium:	6.4	High:	3.0	Very High:	0.0	Slopes Greater Than 72%:	1.6
Wetland Type			Forested Wetland:	0.9						
TLMP High Value Marten Habitat	10.0									

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS:

No Concerns

FISH/WATERSHED:

Class I PA1 northwest: Greater of 100 foot or RMA buffer to form unit boundary.
Class II HC3 (direct) west: Greater of 100 foot buffer or RMA (top of V-notch) to form unit boundary.
Class II HC2 (direct) west: Greater of 100 foot buffer or RMA (top of V-notch) to form unit boundary.

GEOLOGY:

High landslide potential area. See Soils for mitigation measures.

LANDS:

No concerns.

RECREATION/VISUALS:

No Concerns

SILVICULTURE:

Moderately low productivity. Clearcut harvest 25 acres. Stand should regenerate naturally. Harvest deferred on 1 acre. CT 10/22/97

SOILS:

A small area (three acres) of high landslide potential slopes (MMI=3) is located in the south end of this unit (BMP 13.5). Forested wetlands are found along the margins of this unit (BMP 12.5). Use a low impact logging system on these sites which minimizes ground disturbance and provides at least partial log suspension when yarding (BMP 13.9). Roads have been located in this unit to avoid wetlands and areas of steep, potentially unstable slopes (BMP 14.2). About 1.6 acres of this unit consist of slopes greater than 72 percent. An on-site analysis of these slopes by the IDT soil scientist determined that the risk of potential impacts of accelerated erosion on downslope and downstream fish habitat, other beneficial uses of water and other resources was minimal and these slopes are included within the timber harvest unit (BMP 13.2).

TIMBER:

Planned logging systems design for this unit is running skyline and live skyline. Confirm final road and landing locations.

WILDLIFE:

Maintain 1000 foot beach buffer.
Marten guidelines apply: maintain 10-20% of canopy, average 4 large trees/acre (20-30"+), average 3 snags per acre, average 3 pieces downed logs per acre (20-30"+).
Unit is within 0.5 miles of a bald eagle nest. Follow Interagency Agreement. Blasting prohibited within 0.5 mile of nest March 1 through May 31. If nest is determined active, blasting prohibited within 0.5 mile of nest June 1 through August 31.

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 217

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, //files/rel/library/gis/sealevel/draftcard/draftcard.mxd



- | | | | |
|--|-----------------------|--|---------------------------------|
| | Class 1 Stream | | Stream, Beach or Estuary Buffer |
| | Class 2 Stream | | Private Land |
| | Class 3 Stream | | Riparian Soil Buffer |
| | Section Line | | Body of Water |
| | Planning Road | | Prior Harvest |
| | Unit Boundary | | Deferred from Harvest |
| | Settling Line | | Mass Movement Index 4 Soil |
| | Contour or Ortho line | | |
| | Other Sealevel | | |

Low Volume - 3
 Medium Volume - 13
 High Volume - 9
 Unknown Volume - 0
 Total Acres - 26
 Potential MBF - 697
 Quarter Quad - klns5e
 VCU Number - 7460
 Photo Number - 1390020
 Alternative Pattern - 20000
 * Landing

LOGGING SYSTEMS Abbrev.

RS Running Skyline
 HE Helicopter
 HL High Lead
 SL Slack Line
 SH Shovel Yarding

Projection - Stateplane



Eagle Nest



Unit Data Card - Sea Level Draft EIS

Unit Number:	218	Planned Acres:	15.9	Silvicultural Systems:	CC, DEF	In Alternative:	2
LUD:	ML	Harvest Acres:	9.8	Management Area:	K35	VCU Number:	7460
Primary Watershed Code:	E77A	Primary WAA Number:	405	Quad:	ktnc5se	Photo:	1390-20
Number of Settings:	6	Logging System:	RS	Total Estimated Harvest Volume (MBF):		291.4	

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	15.9	Cedar:	0.0	Mixed Hem/Spr:	0.0	Nonforested:	0.0		
Site Productivity Classes	Low:	0.0	Medium:	15.9	High:	0.0	Primary Aspect:				NE	
Volume Strata	Low:	0.0	Medium:	10.1	High:	5.8	Noncommercial:	0.0	Primary ROS Code:			RM
Visuals	Seen:	9.8	Not Seen:	0.0								
VQOs	PR:	0.0	MM:	0.0	M:	9.8	P:	0.0	R:			0.0
VAC Rating	Low:	0.0	Intermediate:	14.7	High:	1.1	Roadless:				0.0	
Mass Movement Index	Low:	10.1	Medium:	5.7	High:	0.0	Very High:	0.0	Slopes Greater Than 72%:			0.0
Wetland Type		Forested Wetland:		0.2								
TLMP High Value Marten Habitat		6.5										

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS:

No Concerns

FISH/WATERSHED:

Class I MC3 west: Greater of 100 foot or RMA (top of sideslope) buffer to form unit boundary.

Class I PA1 northeast: Greater of 100 foot or RMA buffer to form unit boundary.

Class III HC3 southeast: Sideslope S&G buffer (top of V-notch) to form unit boundary.

Class III HC2 east: Sideslope S&G buffer (top of V-notch) to form unit boundary.

GEOLOGY:

No concerns.

LANDS:

No concerns.

RECREATION/VISUALS:

No Concerns

SILVICULTURE:

Moderate productivity. Clearcut harvest 10 acres. Stand should regenerate naturally. Harvest deferred on 5.9 acres to meet Marten standards (see wildlife). CT 10/22/97

SOILS:

No concerns.

TIMBER:

Planned logging systems design for this unit is Running Skyline. Confirm final road and landing locations.

WILDLIFE:

Marten guidelines apply: maintain 10-20% of canopy, average 4 large trees/acre (20-30"+), average 3 snags per acre, average 3 pieces downed logs per acre (20-30"+).

Unit is within 0.5 miles of a bald eagle nest. Follow Interagency Agreement. Blasting prohibited within 0.5 mile of nest March 1 through May 31. If nest is determined active, blasting prohibited within 0.5 mile of nest June 1 through August 31.

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 218

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, //files/csl/library/gis/sealevel/draftcard/draftcard.mxd



<ul style="list-style-type: none"> Class 1 Stream Class 2 Stream Class 3 Stream Section Line Planning Road Unit Boundary Settling Line Contour or Ortho line Other Sealevel 	<ul style="list-style-type: none"> Stream, Marsh or Satuary Buffer Private Land Riparian Soil Buffer Body of Water Prior Harvest Deferred from Harvest Mass Movement Index 4 Soil 	<ul style="list-style-type: none"> Low Volume - 0 Medium Volume - 8 High Volume - 1 Unknown Volume - 0 Total Acres - 16 Potential WBF - 268 Quarter Quad - kincSue VCU Number - 7460 Photo Number - 1390020 Alternative Pattern - 20000 * Landing
--	--	--

LOGGING SYSTEMS Abbrev.

RS Running Skyline
 HE Helicopter
 HL High Lead
 SL Slack Line
 SH Shovel Yarding

Projection - Stateplane

Feet
 0 526 1056 1582 2112

Eagle Nest

Unit Data Card - Sea Level Draft EIS

Unit Number:	219	Planned Acres:	49.0	Silvicultural Systems:	CC, DEF	In Alternatives:	2, 3, 4, 6
LUD:	TP	Harvest Acres:	41.3	Management Area:	K35	VCU Number:	7460
Primary Watershed Code:	E77A	Primary WAA Number:	405	Quad:	ktnc5se	Photo:	1390-20
Number of Settings:	12	Logging System:	RS	Total Estimated Harvest Volume (MBF):		1,169.4	

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	49.0	Cedar:	0.0	Mixed Hem/Spr:	0.0	Nonforested:	0.0	
Site Productivity Classes	Low:	1.3	Medium:	47.6	High:	0.0	Primary Aspect:				E
Volume Strata	Low:	9.0	Medium:	14.8	High:	25.2	Noncommercial:	0.0			
Visuals	Seen:	0.0	Not Seen:	41.3	Primary ROS Code:						RM
VQOs	PR:	0.0	MM:	41.3	M:	0.0	P:	0.0	R:	0.0	
VAC Rating	Low:	0.0	Intermediate:	0.0	High:	49.0	Roadless:				41.3
Mass Movement Index	Low:	1.3	Medium:	13.6	High:	34.0	Very High:	0.0	Slopes Greater Than 72%:		2.0
Wetland Type	Sphagnum Peat Bog:		3.0								
TLMP High Value Marten Habitat	24.0										

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS:

No concerns.

FISH/WATERSHED:

Class I FP3 east: Greater of 130 foot or floodplain RMA buffer required.

GEOLOGY:

High landslide potential. See **Soils** for mitigation measures.

LANDS:

No concerns.

RECREATION/VISUALS:

No concerns.

SILVICULTURE:

Moderately low productivity. Clearcut harvest 41 acres. Plant 3 acres with AYC the remainder of the stand should regenerate naturally. Harvest deferred on 8 acres to meet Marten standards(see wildlife). CT 10/22/97

SOILS:

The Sphagnum peat bog located in this unit has been placed in the deferral area (BMP 12.5). Unit contains high landslide potential areas (BMP 13.5). Some of these areas have been deferred from timber harvest (BMP 13.5). Recommend the use of a low impact logging system on these slopes (BMP 13.9). Roads have been located to avoid these steep, potentially unstable slopes (BMP 14.2). This unit contains 2.0 acres of slopes greater than 72 percent. These slopes were included in the deferral areas.

TIMBER:

Planned logging systems design for this unit is running skyline. Confirm final road and landing locations.

WILDLIFE:

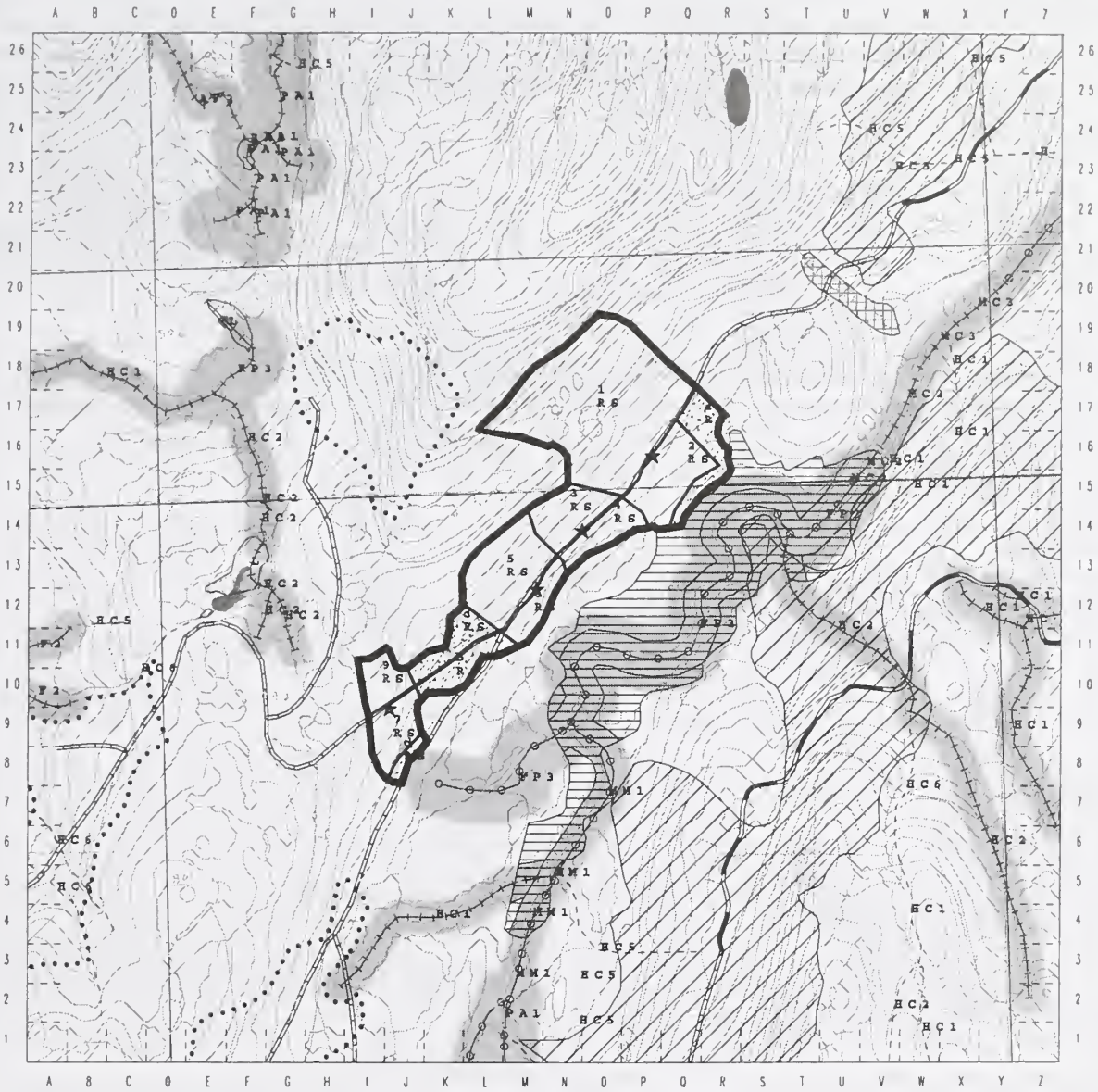
Marten guidelines apply: maintain 10-20 percent of canopy, average 4 large trees/acre (20-30"+), average 3 snags per acre, average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 219

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1987, //s:/files/cel/library/gis/sealevel/draft/cord/draftcord.mxd



Note: Compiled from various digital geographic data. This map may not meet National Map Accuracy Standards



Unit Data Card - Sea Level Draft EIS

Unit Number:	220	Planned Acres:	28.6	Silvicultural Systems:	CC, DEF	In Alternatives:	2, 3, 4, 5, 6
LUD:	TP	Harvest Acres:	20.9	Management Area:	K35	VCU Number:	7460
Primary Watershed Code:	E77A	Primary WAA Number:	405	Quad:	ktnb5ne	Photo:	1390-20
Number of Settings:	4	Logging System:	RS	Total Estimated Harvest Volume (MBF):		606.2	

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	28.6	Cedar:	0.0	Mixed Hem/Spr:	0.0	Nonforested:	0.0			
Site Productivity Classes	Low:	0.2	Medium:	28.4	High:	0.0	Primary Aspect:				W		
Volume Strata	Low:	3.4	Medium:	25.2	High:	0.0	Noncommercial:	0.0	Primary ROS Code:			SPNM	
Visuals	Seen:	0.0	Not Seen:	20.9									
VQOs	PR:	0.0	MM:	20.9	M:	0.0	P:	0.0	R:	0.0	Roadless:	20.9	
VAC Rating	Low:	0.0	Intermediate:	0.0	High:	28.6							
Mass Movement Index	Low:	0.2	Medium:	28.4	High:	0.0	Very High:	0.0	Slopes Greater Than 72%:			1.5	
Wetland Type	Short Sedge Meadow:			0.3	Forested Wetland:			28.3					
TLMP High Value Marten Habitat	0.0												

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS:

No Concerns

FISH/WATERSHED:

Class II (direct) AF2 north: Greater of 140 foot or alluvial fan RMA buffer required.

Class III HC6 north: Sideslope S&G buffer to form unit boundary.

Class III HC6 (2 each) center: Sideslope S&G buffer (top of V-notch), split yard or full suspension required.

Class III HC5 south: Sideslope S&G buffer to form unit boundary.

GEOLOGY:

No concerns.

LANDS:

No concerns.

RECREATION/VISUALS:

No Concerns

SILVICULTURE:

Moderate productivity. Clearcut harvest 21 acres. Plant 2 acres with AYC the remainder of the stand should regenerate naturally. Harvest deferred on 7.6 acres for organic wetland concerns. CT 10/22/97

SOILS

The entire unit is composed of forested wetlands and a small area of nonforested short sedge meadow (BMP 12.5). Use a low impact logging system which minimizes ground disturbance and provides at least partial log suspension when yarding on these wetlands (BMP 13.9). About 1.5 acres of this unit consist of slopes greater than 72 percent. These slopes were placed in a deferral area.

TIMBER:

Planned logging systems design for this unit is running skyline. Confirm final road and landing locations.

WILDLIFE:

No wildlife mitigation anticipated for this unit.

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 220

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, /s:/files/rcd/library/gis/sealevel/draftcard/draftcard.mxd



Note: Compiled from various digital geographic data. This map may not meet National Map Accuracy Standards

	Class 1 Stream		Stream, Beach or Estuary Buffer
	Class 2 Stream		Private Land
	Class 3 Stream		Riparian Soil Buffer
	Section Line		Body of Water
	Planning Road		Prior Harvest
	Unit Boundary		Deferred from Harvest
	Setting Line		Mass Movement Index 4 Soil
	Contour or Ortho line		
	Other Sealevel		

Low Volume - 3
 Medium Volume - 17
 High Volume - 0
 Unknown Volume - 0
 Total Acres - 29
 Potential WBF - 513
 Quarter Quad - klabSne
 VCU Number - 7460
 Photo Number - 1390020
 Alternative Pattern - 23456
 * Loading

LOGGING SYSTEMS Abbrev.

RS Running Skyline
 HE Helicopter
 HL High Lead
 SL Slack Line
 SH Shovel Yarding

Projection - Stateplane



Eagle Nest



Unit Data Card - Sea Level Draft EIS

Unit Number:	221	Planned Acres:	8.5	Silvicultural Systems:	CC, DEF	In Alternative:	2
LUD:	TP	Harvest Acres:	7.2	Management Area:	K35	VCU Number:	7460
Primary Watershed Code:	E77A	Primary WAA Number:	405	Quad:	ktnb5ne	Photo:	1390-185
Number of Settings:	5	Logging Systems:	RS, SH	Total Estimated Harvest Volume (MBF):	355.2		

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	8.5	Cedar:	0.0	Mixed Hem/Spr:	0.0	Nonforested:	0.0
Site Productivity Classes	Low:	0.5	Medium:	8.0	High:	0.0	Primary Aspect:			N
Volume Strata	Low:	0.0	Medium:	8.5	High:	0.0	Noncommercial:	0.0		
Visuals	Scen:	0.0	Not Seen:	7.2	Primary ROS Code: SPNM					
VQOs	PR:	0.0	MM:	7.2	M:	0.0	P:	0.0	R:	0.0
VAC Rating	Low:	0.0	Intermediate:	0.0	High:	8.5	Roadless:			7.2
Mass Movement Index	Low:	0.4	Medium:	8.0	High:	0.0	Very High:	0.0	Slopes Greater Than 72%:	0.0
Wetland Type	Forested Wetland:		8.3	Scrub-Shrub Muskeg:		0.2				
TLMP High Value Marten Habitat	0.0									

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS:

No Concerns

FISH/WATERSHED:

Class I PA 3 north: Greater of 100 foot or RMA buffer to form unit boundary.
Class III HC5 west: Sideslope S&G buffer (top of V-notch) to form unit boundary.
Class III HC5 northeast: Sideslope S&G buffer (top of V-notch) to form unit boundary.

GEOLOGY:

No concerns.

LANDS:

No concerns.

RECREATION/VISUALS:

No Concerns

SILVICULTURE:

Moderate productivity. Clearcut harvest 7 acres. Stand should regenerate naturally. Harvest deferred on 1.5 acres for organic wetland concerns. CT 10/22/97

SOILS:

The entire unit consists of forested wetland and scrub-shrub muskeg (BMP 12.5). Use a low impact logging system which provides at least partial log suspension when yarding (BMP 13.9). Much of this unit would be suitable for shovel yarding (BMP 13.9). Use overlay road construction and minimize side ditching, where practical, to minimize the effects upon ground-water flow and alteration of wetness (BMPs 12.5 and 14.3).

TIMBER:

Planned logging systems design for this unit is running skyline and shovel. Confirm final road and landing locations.

WILDLIFE:

No wildlife mitigation anticipated for this unit.

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 221

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, //a:\files\ref\library\gis\sealevel\draftcard\draftcard.mxd



Note: Compiled from various digital geographic data. This map may not meet National Map Accuracy Standards

	Class 1 Stream		Stream, Beach or Estuary Buffer
	Class 2 Stream		Private Land
	Class 3 Stream		Riparian Soil Buffer
	Section Line		Body of Water
	Planning Road		Prior Harvest
	Unit Boundary		Deferred from Harvest
	Setting Line		Mass Movement Index 4 Soil
	Contour or Ortho line		
	Other Sealevel		

Low Volume - 0
Medium Volume - 7
High Volume - 0
Unknown Volume - 0
Total Acres - 8
Potential M8F - 189
Quarter Dood - 41454e
VCU Number - 7460
Photo Number - 1390185
Alternative Pattern - 20000
* Landing

LOGGING SYSTEMS Abbrev.

RS Running Skyline
HE Helicopter
HL High Lead
SL Slack Line
SH Shovel Yarding

Projection - Stateplane



Eagle Nest



Unit Data Card - Sea Level Draft EIS

Unit Number:	222	Planned Acres:	34.7	Silvicultural Systems:	CC, DEF	In Alternative:	2
LUD:	TP	Harvest Acres:	25.6	Management Area:	K35	VCU Number:	7460
Primary Watershed Code:	E77A	Primary WAA Number:	405	Quad:	kinb5ne	Photo:	1390-185
Number of Settings:	3	Logging System:	SL	Total Estimated Harvest Volume (MBF):	640.9		

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	34.7	Cedar:	0.0	Mixed Hem/Spr:	0.0	Nonforested:	0.0		
Site Productivity Classes	Low:	0.2	Medium:	34.5	High:	0.0	Primary Aspect:				E	
Volume Strata	Low:	32.1	Medium:	1.3	High:	1.2	Noncommercial:	0.1	Primary ROS Code: SPNM			
Visuals	Seen:	0.0	Not Seen:	25.6								
VQOs	PR:	0.0	MM:	25.6	M:	0.0	P:	0.0	R:	0.0		
VAC Rating	Low:	0.0	Intermediate:	0.0	High:	34.7	Roadless:				25.6	
Mass Movement Index	Low:	0.2	Medium:	34.5	High:	0.0	Very High:	0.0	Slopes Greater Than 72%:			0.2
Wetland Type	Forested Wetland:		34.6									
TLMP High Value Marten Habitat	1.0											

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS:

No concerns

FISH/WATERSHED:

Class I PA3 east: Greater of 100 foot or RMA buffer to form unit boundary.

GEOLOGY:

No concerns.

LANDS:

No concerns.

RECREATION/VISUALS:

No concerns

SILVICULTURE:

Moderate productivity. Clearcut harvest 26 acres. Plant 3 acres of AYC the remainder of the stand should regenerate naturally. Harvest deferred on 8.7 acres for organic wetland concerns and to meet Marten standards (see wildlife). CT 10/22/97

SOILS:

Most of this unit is made up of forested wetland (BMP 12.5). Use a low impact logging system which minimizes ground disturbance and provides at least partial log suspension when yarding (BMP 13.9) Use overlay road construction and minimize side ditching where practical to minimize the effects upon ground-water flow and alteration of wetness (BMPs 12.5 and 14.3)

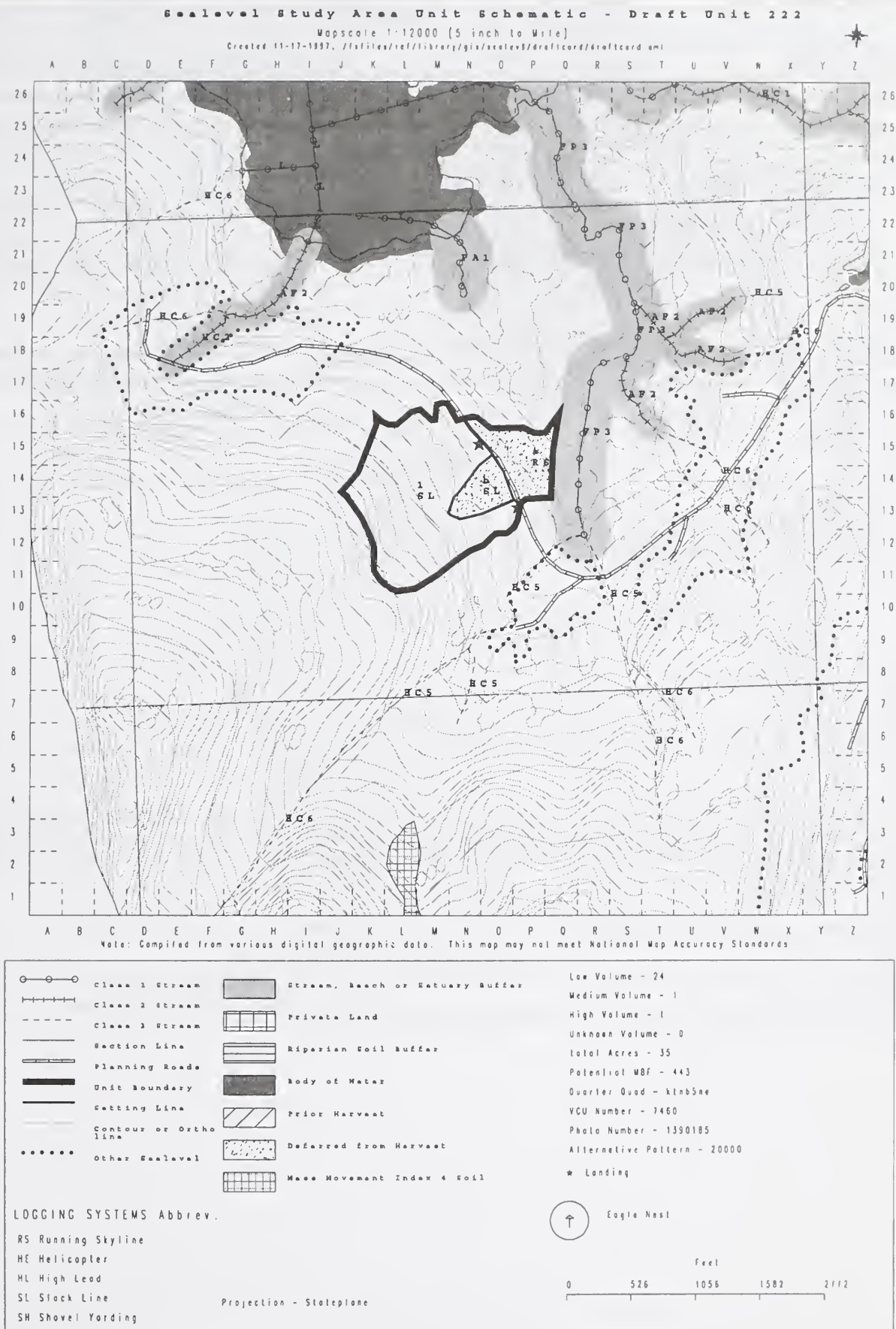
TIMBER:

Planned logging systems design for this unit is slackline. Confirm final road and landing locations.

WILDLIFE:

Marten guidelines apply: maintain 10-20% of canopy, average 4 large trees/acre (20-30"+), average 3 snags per acre, average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS



Unit Data Card - Sea Level Draft EIS

Unit Number:	223	Planned Acres:	24.4	Silvicultural Systems:	CC, DEF	In Alternative:	2
LUD:	TP	Harvest Acres:	20.7	Management Area:	K35	VCU Number:	7460
Primary Watershed Code:	E77A	Primary WAA Number:	405	Quad:	ktnb5ne	Photo:	1390-185
Number of Settings:	5	Logging System:	RS	Total Estimated Harvest Volume (MBF):	593.2		

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	24.4	Cedar:	0.0	Mixed Hem/Spr:	0.0	Nonforested:	0.0
Site Productivity Classes	Low:	0.3	Medium:	24.1	High:	0.0	Primary Aspect: N			
Volume Strata	Low:	2.4	Medium:	5.8	High:	16.2	Noncommercial:	0.0	Primary ROS Code: SPNM	
Visuals	Seen:	0.0	Not Seen:	20.7						
VQOs	PR:	0.0	MM:	20.7	M:	0.0	P:	0.0	R:	0.0
VAC Rating	Low:	0.0	Intermediate:	0.0	High:	24.4	Roadless: 20.7			
Mass Movement Index	Low:	3.2	Medium:	21.2	High:	0.0	Very High:	0.0	Slopes Greater Than 72%:	0.0
Wetland Type	Short Sedge Meadow:		0.1	Forested Wetland:		21.5				
TLMP High Value Marten Habitat	15.5									

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS:

No Concerns

FISH/WATERSHED:

Class II (direct) AF2 north: Greater of 100 foot or RMA buffer to form unit boundary.

Class II (direct) HC2 center: Greater of 100 foot or RMA (top of V-notch) to form unit boundary.

Class III HC6 northwest: Sideslope S&G buffer (top of V-notch).

GEOLOGY:

No concerns.

LANDS:

No concerns.

RECREATION/VISUALS:

No Concerns

SILVICULTURE:

Moderately productive. Clearcut harvest 21 acres. Stand should regenerate naturally. Harvest deferred on 3.4 acres to meet Marten standards (see wildlife). CT 10/22/97

SOILS:

Most of this unit consists of forested wetland and short sedge meadow (BMP 12.5). Use a low impact logging system which provides at least partial log suspension when yarding (BMP 13.9). Much of this unit would be suitable for shovel yarding (BMP 13.9). Use overlay road construction and minimize side ditching, where practical, to minimize the effects upon ground-water flow and alteration of wetness (BMPs 12.5 and 14.3). Avoid the placement of fill material on these wetlands (BMP 14.19).

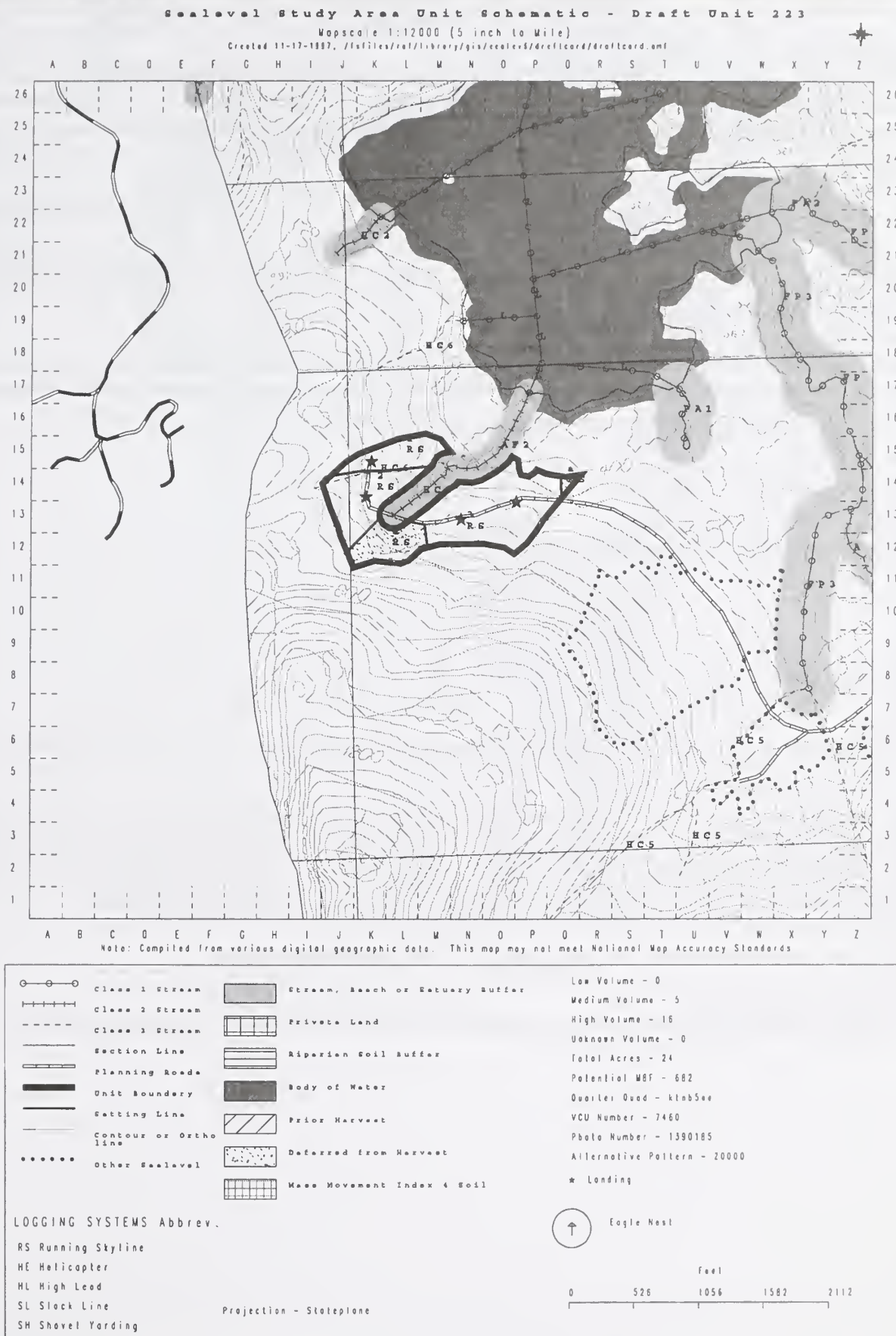
TIMBER:

Planned logging systems design for this unit is running skyline. Confirm final road and landing locations.

WILDLIFE:

Marten guidelines apply: maintain 10-20 percent of canopy, average 4 large trees/acre (20-30"+), average 3 snags per acre, average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS



Unit Data Card - Sealevel Draft EIS

Unit Number:	224	Planned Acres:	57.6	Silvicultural Systems:	CC, DEF	In Alternatives:	2, 3, 4, 5, 6
LUD:	TP	Harvest Acres:	47.8	Management Area:	K35	VCU Number:	7460
Primary Watershed Code:	E77A	Primary WAA Number:	405	Quad:	ktnb5ne	Photo:	1390-19
Number of Settings:	10	Logging Systems:	RS, SL	Total Estimated Harvest Volume (MBF):	1,281.6		

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	57.6	Cedar:	0.0	Mixed Hem/Spr:	0.0	Nonforested:	0.0	
Site Productivity Classes	Low:	1.6	Medium:	56.0	High:	0.0	Primary Aspect:				E
Volume Strata	Low:	38.2	Medium:	19.4	High:	0.0	Noncommercial:	0.0			
Visuals	Seen:	0.0	Not Seen:	47.8					Primary ROS Code:	RM	
VQOs	PR:	0.0	MM:	47.8	M:	0.0	P:	0.0	R:	0.0	
VAC Rating	Low:	0.0	Intermediate:	0.0	High:	57.6	Roadless:				47.8
Mass Movement Index	Low:	5.5	Medium:	52.1	High:	0.0	Very High:	0.0	Slopes Greater Than 72%:	1.8	
Wetland Type	Short Sedge Meadow:		4.5	Forested Wetland:		8.6	Scrub-Shrub Muskeg:		10.0		
TLMP High Value Marten Habitat	0.0										

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO 1/2/96 RAL

ENGINEERING/ROADS:

No Concerns

FISH/WATERSHED:

Class I PA1 (2 each) east: 100 foot S&G palustrine buffer.

Class II (direct) HC1 north: Greater of 100 foot or RMA (top of V-notch) buffer required.

GEOLOGY:

No concerns.

LANDS:

No concerns.

RECREATION/VISUALS:

No Concerns

SILVICULTURE:

Moderately low productivity. Clearcut harvest 48 acres. Stand should regenerate naturally. Harvest deferred on 10 acres for organic wetland concerns. CT 10/22/97

SOILS:

The upper part of this unit is made up of scrub-shrub muskeg wetlands. The southeast corner of the unit includes 8.6 acres of forested wetlands. Areas of short sedge meadow wetlands are located along the eastern unit boundary (BMP 12.5). Use a low impact logging system when logging forested wetlands (BMP 13.9). Roads are located in this unit to avoid wetlands, where possible (BMP 14.2). Use overlay road construction when crossing wetlands, and minimize side-ditching, where practical, to minimize the effects upon ground-water flows (BMP 14.3). About two acres of this unit consist of slopes greater than 72%. An on-site analysis of these slopes by the IDT soil scientist determined that the risk of potential impacts of accelerated erosion on downslope and downstream fish habitat, other beneficial uses of water and other resources was minimal and these slopes are included within the timber harvest unit (BMP 13.2).

TIMBER:

Planned logging systems design for this unit is running skyline and slackline. Confirm final road and landing locations.

WILDLIFE:

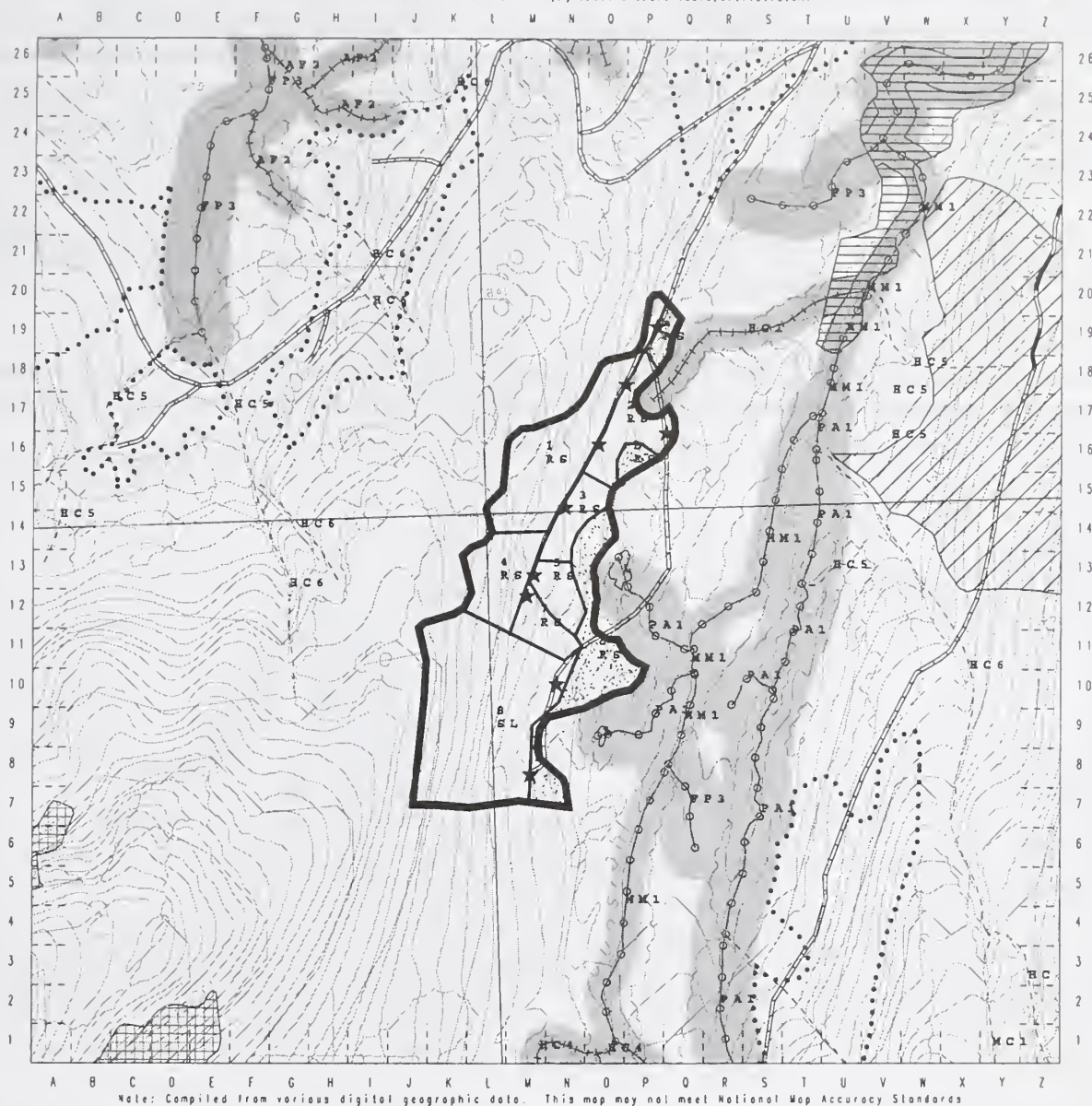
No wildlife mitigation anticipated for this unit.

Unit Data Card - Sealevel Draft EIS

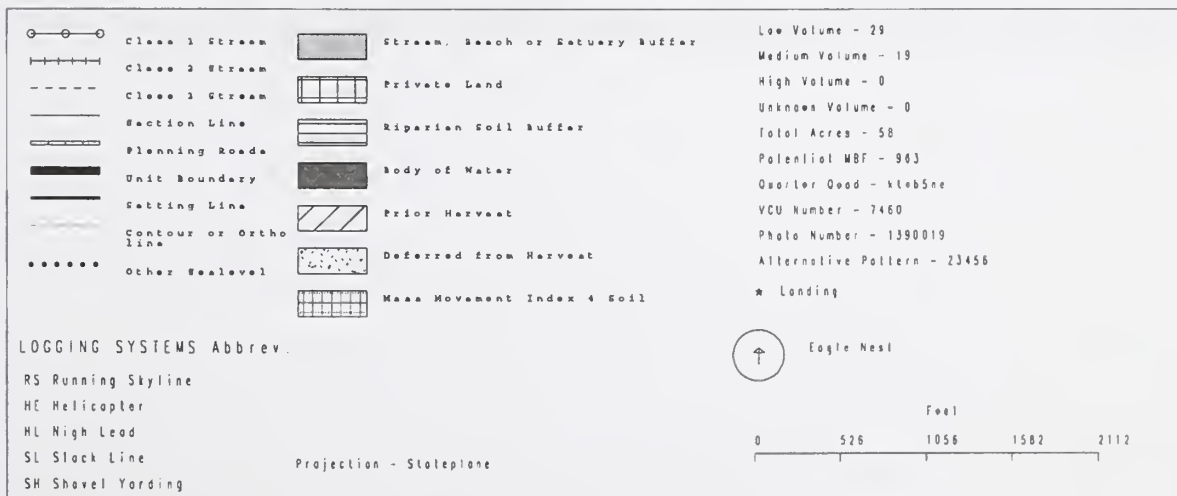
Sealevel Study Area Unit Schematic - Draft Unit 224

Mopscote 1:12000 (5 inch to Mile)

Created 11-17-1997, //files/rel/library/gis/seelev6/drolcord/drolcord.oml



Note: Compiled from various digital geographic data. This map may not meet National Map Accuracy Standards.



Unit Data Card - Sea Level Draft EIS

Unit Number:	226	Planned Acres:	38.2	Silvicultural Systems:	CC, DEF	In Alternatives:	2, 3, 4, 5
LUD	TP	Harvest Acres:	31.5	Management Area:	K35	VCU Number:	7460
Primary Watershed Code:	E77A	Primary WAA Number:	405	Quad:	ktnb5ne	Photo:	1390-18
Number of Settings:	10	Logging System:	RS	Total Estimated Harvest Volume (MBF):		937.4	

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	38.2	Cedar:	0.0	Mixed Hem/Spr:	0.0	Nonforested:	0.0
Site Productivity Classes	Low:	1.2	Medium:	37.0	High:	0.0	Primary Aspect: W			
Volume Strata	Low:	0.0	Medium:	38.2	High:	0.0	Noncommercial:	0.0		
Visuals	Seen:	0.0	Not Seen:	31.5					Primary ROS Code:	RM
VQOs	PR:	0.0	MM:	31.5	M:	0.0	P:	0.0	R:	0.0
VAC Rating	Low:	0.0	Intermediate:	0.0	High:	38.2	Roadless: 31.5			
Mass Movement Index	Low:	1.2	Medium:	37.0	High:	0.0	Very High:	0.0	Slopes Greater Than 72%:	4.5
Wetland Type	Scrub-Shrub		Muskeg:	0.3						
TLMP High Value Marten Habitat	0.0									

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS:

No Concerns

FISH/WATERSHED:

Class I PA1 west: 100 foot S&G palustrine buffer required.

Class III HC6 south: Sideslope S&G buffer (top of V-notch), split yard or full suspension required..

Class III MC1 east: Sideslope S&G buffer to form unit boundary.

GEOLOGY:

No concerns.

LANDS:

No concerns.

RECREATION/VISUALS:

No Concerns

SILVICULTURE:

Moderately low productivity. Clearcut harvest 31 acres. Stand should regenerate naturally. Harvest deferred on 7 acres for stream protection and organic wetland concerns. CT 10/22/97

SOILS:

A small area of scrub-shrub muskeg has been deferred from timber harvest (BMP 12.5). About 4.5 acres of this unit consists of slopes greater than 72%.

An on-site analysis of these slopes by the IDT soil scientist determined that the risk of potential impacts of accelerated erosion on downslope and downstream fish habitat, other beneficial uses of water and other resources was minimal and these slopes are included within the timber harvest unit (BMP 13.2).

TIMBER:

Planned logging systems design for this unit is Running Skyline. Confirm final road and landing locations.

WILDLIFE:

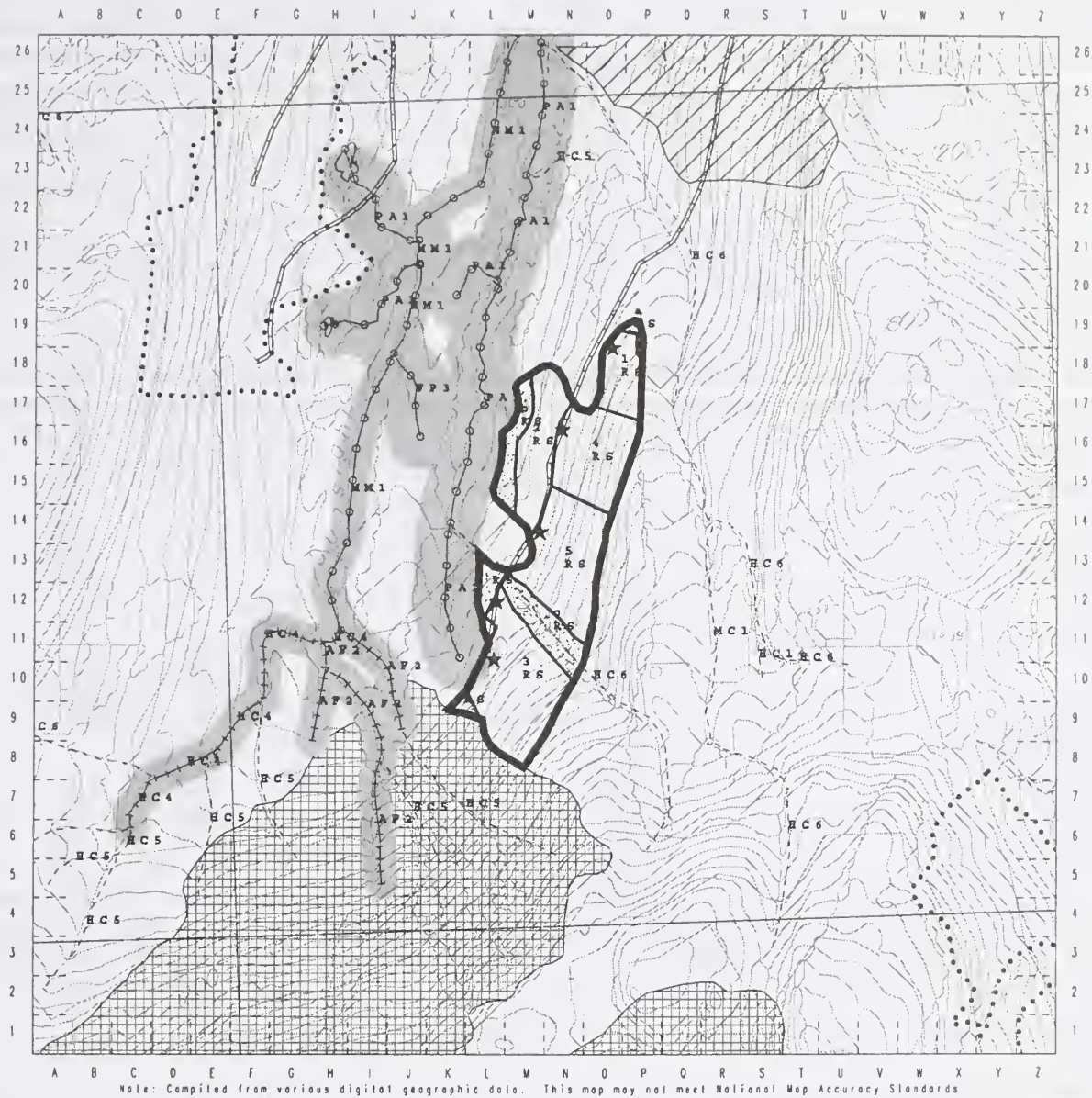
No wildlife mitigation anticipated for this unit.

Unit Data Card - Sea Level Draft EIS

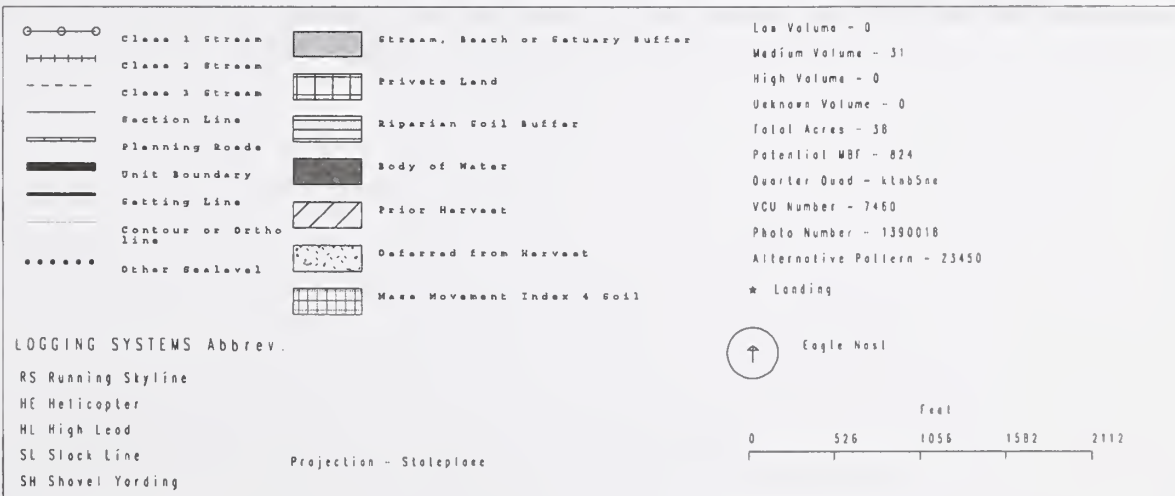
Sealevel Study Area Unit Schematic - Draft Unit 226

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, /s:/files/cnl/library/gis/sealevel/draftcard/draftcard.mxd



Note: Compiled from various digital geographic data. This map may not meet National Map Accuracy Standards



Unit Data Card - Sea Level Draft EIS

Unit Number:	227	Planned Acres:	33.9	Silvicultural Systems:	CC, DEF	In Alternative:	2
LUD:	ML	Harvest Acres:	31.3	Management Area:	K35	VCU Number:	7530
Primary Watershed Code:	E77A	Primary WAA Number:	405	Quad:	ktnb5ne	Photo:	1390-16
Number of Settings:	5	Logging Systems:	RS, HE	Total Estimated Harvest Volume (MBF):	777.0		

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	33.9	Cedar:	0.0	Mixed Hem/Spr:	0.0	Nonforested:	0.0	
Site Productivity Classes	Low:	0.0	Medium:	0.0	High:	33.9	Primary Aspect:				S
Volume Strata	Low:	0.0	Medium:	33.9	High:	0.0	Noncommercial:	0.0			
Visuals	Seen:	31.3	Not Seen:	0.0	Primary ROS Code:						RM
VQOs	PR:	0.0	MM:	0.0	M:	31.3	P:	0.0	R:	0.0	
VAC Rating	Low:	0.0	Intermediate:	33.9	High:	0.0	Roadless:				31.3
Mass Movement Index	Low:	0.0	Medium:	0.0	High:	33.9	Very High:	0.0	Slopes Greater Than 72%:		1.3
Wetland Type	Forested Wetland:			17.9							
TLMP High Value Marten Habitat	0.0										

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS:

No concerns

FISH/WATERSHED:

No concerns

GEOLOGY:

High landslide potential. See Soils for mitigation measures.

LANDS:

No concerns.

RECREATION/VISUALS:

No concerns

SILVICULTURE:

Highly productive. Clearcut harvest 31 acres. Plant 2 acres with AYC the remainder of the stand should regenerate naturally. Harvest deferred on 3 acres for wildlife concerns. CT 10/22/97

SOILS:

This unit consists entirely of high landslide potential (MMI=3) soils (BMP 13.5). The central part of this unit also includes about 18 acres of forested wetlands (BMP 12.5). Use a low impact logging system which minimizes ground surface disturbance and provides at least partial log suspension when yarding (BMP 13.9). Access roads have been located to avoid these steep, potentially unstable slopes (BMPs 14.2 and 14.7). About an acre of this unit consist of slopes greater than 72 percent. These slopes were placed in a deferral area.

TIMBER:

Planned logging systems design for this unit is running skyline and helicopter. Confirm final road and landing locations.

WILDLIFE:

No wildlife mitigation anticipated for this unit.

Unit Data Card - Sea Level Draft EIS

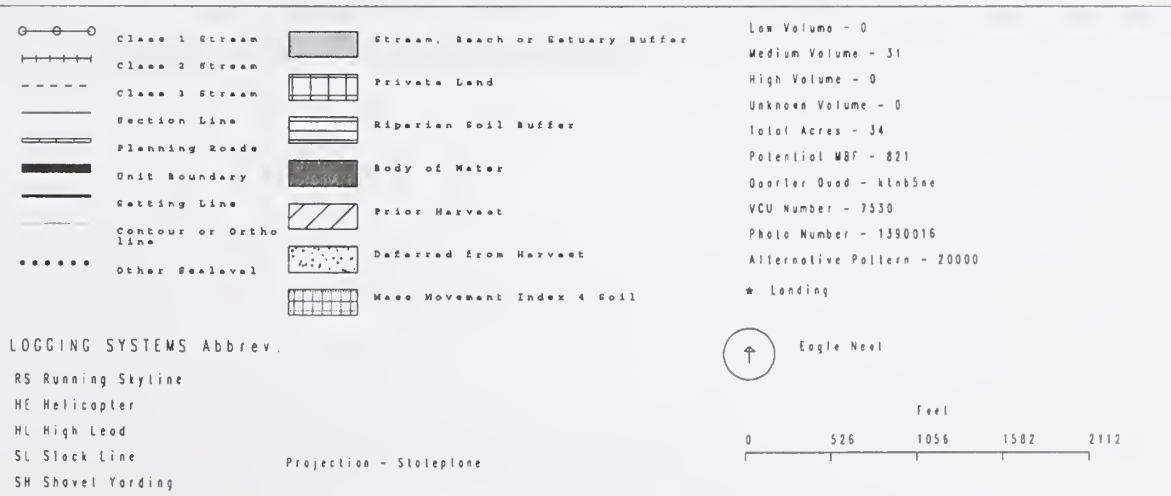
Sealevel Study Area Unit Schematic - Draft Unit 227

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, //file:///c:/libray/gis/sealevel/draftcard/draftcard.mxd



Note: Compiled from various digital geographic data. This map may not meet National Map Accuracy Standards



Unit Data Card - Sea Level Draft EIS

Unit Number:	228	Planned Acres:	27.1	Silvicultural Systems:	CC, DEF	In Alternative:	2
LUD:	ML	Harvest Acres:	23.1	Management Area:	K35	VCU Number:	7530
Primary Watershed Code:	E77A	Primary WAA Number:	405	Quad:	ktnb5ne	Photo:	1390-16
Number of Settings:	5	Logging Systems:	RS, LS	Total Estimated Harvest Volume (MBF):	661.2		

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	27.1	Cedar:	0.0	Mixed Hem/Spr:	0.0	Nonforested:	0.0			
Site Productivity Classes	Low:	0.0	Medium:	0.0	High:	27.1	Primary Aspect:				S		
Volume Strata	Low:	0.0	Medium:	6.2	High:	20.9	Noncommercial:	0.0	Primary ROS Code:			RM	
Visuals	Seen:	14.5	Not Seen:	8.6	Primary ROS Code:								RM
VQOs	PR:	0.0	MM:	8.6	M:	0.0	P:	0.0	R:	0.0			
VAC Rating	Low:	0.0	Intermediate:	16.4	High:	10.7	Roadless:				23.1		
Mass Movement Index	Low:	0.0	Medium:	0.0	High:	27.1	Very High:	0.0	Slopes Greater Than 72%:		4.4		
Wetland Type	Forested Wetland:		13.1	Scrub-Shrub Muskeg:		3.0							
TLMP High Value Marten Habitat	21.0												

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS:

No concerns

FISH/WATERSHED:

GEOLOGY:

High landslide potential. See Soils for mitigation measures.

LANDS:

No concerns.

RECREATION/VISUALS:

No concerns

SILVICULTURE:

Highly productive. Clearcut harvest 23.1 acres. Stand should regenerate naturally. Harvest deferred on 4 acres to meet Marten standards (see wildlife). This stand has Sensitive Plant concerns, specifically *Listera convallarioides*, plants are located with a deferred area, see resource report. CT 10/22/97

SOILS:

This unit consists entirely of high landslide potential (MMI=3) soils (BMP 13.5). The lower part of this unit also includes about 13 acres of forested wetlands (BMP 12.5). Use a low impact logging system which minimizes ground surface disturbance and provides at least partial log suspension when yarding (BMP 13.9). Access roads have been located to avoid these steep, potentially unstable slopes (BMPs 14.2 and 14.7) and wetlands.

This unit contains about 4.4 acres of slopes greater than 72 percent. 1.2 acres of these steep slopes were placed in deferral areas (BMP 13.5).

An on-site analysis of these slopes by the IDT soil scientist determined that the risk of potential impacts of accelerated erosion on downslope and downstream fish habitat, other beneficial uses of water and other resources was minimal and these slopes are included within the timber harvest unit (BMP 13.2).

TIMBER:

Planned logging systems design for this unit is running skyline and live skyline. Confirm final road and landing locations.

WILDLIFE:

Marten guidelines apply: maintain 10-20% of canopy, average 4 large trees/acre (20-30"+), average 3 snags per acre, average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 228

Mapscale 1:12000 (5 inch to mile)

Created 11-17-1997, //files/rel/library/gis/sealevel/draftcard/draftcard.eml



Note: Compiled from various digital geographic data. This map may not meet National Map Accuracy Standards



Unit Data Card - Sea Level Draft EIS

Unit Number:	229	Planned Acres:	97.1	Silvicultural Systems:	ITM, DEF	In Alternative:	none
LUD:	TP	Harvest Acres:	40.8	Management Area:	K35	VCU Number:	7460
Primary Watershed Code:	E77A	Primary WAA Number:	405	Quad:	ktnb5ne	Photo:	1390-17
Number of Settings:	13	Logging System:	HE	Total Estimated Harvest Volume (MBF):	1,040.4		

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	97.1	Cedar:	0.0	Mixed Hem/Spr:	0.0	Nonforested:	0.0	
Site Productivity Classes	Low:	0.9	Medium:	96.1	High:	0.1	Primary Aspect:				E
Volume Strata	Low:	0.9	Medium:	77.1	High:	19.1	Noncommercial:	0.0			
Visuals	Seen:	81.6	Not Seen:	0.0						Primary ROS Code:	RM
VQOs	PR:	0.0	MM:	0.0	M:	81.6	P:	0.0	R:	0.0	
VAC Rating	Low:	0.0	Intermediate:	94.4	High:	2.7				Roadless:	40.8
Mass Movement Index	Low:	0.9	Medium:	0.0	High:	96.2	Very High:	0.0	Slopes Greater Than 72%:	7.9	
Wetland Type	Forested Wetland:			57.9	Scrub-Shrub Muskeg:			2.2			
TLMP High Value Marten Habitat	22.0										

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS:

No concerns.

FISH/WATERSHED:

No concerns.

GEOLOGY:

High landslide potential. See Soils for mitigation measures.

LANDS:

No concerns.

RECREATION/VISUALS:

No Concerns - all harvest acres would be ITM.

SILVICULTURE:

Moderately productive. Helicopter harvest 81 acres using a diameter limit prescription. Defer harvest on 16 acres to meet Marten standards (see wildlife). CT 10/21/97

SOILS:

This unit consists almost entirely of high landslide potential (MMI=3) soils (BMP 13.5). Over 60 acres of this unit consist of scrub-shrub muskeg and forested wetlands (BMP 12.5). Use a low impact logging system which minimizes ground surface disturbance and provides at least partial log suspension when yarding (BMP 13.9). Access roads have been located to avoid these steep, potentially unstable slopes (BMPs 14.2 and 14.7). Use overlay road construction and minimize side ditching on wetlands, where practical, to minimize the effects upon ground-water flows (BMPs 12.5 and 14.3). 7.9 acres of this unit consists of slopes greater than 72 percent. 1.4 acres of these steep slopes were placed in deferral areas by the IDT (BMP 13.5). An on-site analysis of the other 6.5 acres by the IDT soil scientist determined that the risk of potential impacts of accelerated erosion on downslope and downstream fish habitat, other beneficial uses of water and other resources was minimal and these slopes are included within the timber harvest unit (BMP 13.2).

TIMBER:

Planned logging systems design for this unit is helicopter.

WILDLIFE:

Marten guidelines apply: maintain 10-20 percent of canopy, average 4 large trees/acre (20-30"+), average 3 snags per acre, average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 229

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, /datafiles/ref/library/gis/sealevel6/draftcard/draftcard.mxd



Unit Data Card - Sea Level Draft EIS

Unit Number:	230	Planned Acres:	58.0	Silvicultural Systems:	CC, DEF	In Alternatives:	3, 4, 5, 6
LUD:	TP	Harvest Acres:	44.9	Management Area:	K35	VCU Number:	7530
Primary Watershed Code:	E77A	Primary WAA Number:	405	Quad:	ktnb5ne	Photo:	1390-15
Number of Settings:	12	Logging Systems:	RS, SH	Total Estimated Harvest Volume (MBF):	1,216.9		

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	58.0	Cedar:	0.0	Mixed Hem/Spr:	0.0	Nonforested:	0.0	
Site Productivity Classes	Low:	0.0	Medium:	9.8	High:	48.2	Primary Aspect:				E
Volume Strata	Low:	7.0	Medium:	28.2	High:	22.8	Noncommercial:	0.0	Primary ROS Code:		RM
Visuals	Seen:	18.0	Not Seen:	26.9							
VQOs	PR:	0.0	MM:	26.9	M:	18.0	P:	0.0	R:	0.0	
VAC Rating	Low:	0.0	Intermediate:	12.9	High:	45.1	Roadless:				44.9
Mass Movement Index	Low:	58.0	Medium:	0.0	High:	0.0	Very High:	0.0	Slopes Greater Than 72%:	0.0	
Wetland Type	Forested Wetland:		39.9	Scrub-Shrub Muskeg:		5.8					
TLMP High Value Marten Habitat	23.5										

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS:

No concerns.

FISH/WATERSHED:

Class I FP3 east: Greater of 130 foot or floodplain RMA buffer required.

Class II (direct) HC2 north: Greater of 100 foot or RMA (top of V-notch) buffer required.

GEOLOGY:

No concerns.

LANDS:

No concerns.

RECREATION/VISUALS:

No concerns.

SILVICULTURE:

Highly productive. Clearcut harvest 45 acres. Stand should regenerate naturally. Harvest deferred on 14 acres to meet Marten standards (see wildlife). CT 10/22/97

SOILS:

The southern two-thirds of this unit consists of forested wetlands (BMP 12.5). Use a low impact logging system on these wetlands which minimizes ground surface disturbance and provides at least partial log suspension when yarding (BMP 13.9). Use overlay road construction and minimize side-ditching, where practical, to minimize the effects upon ground-water flows (BMPs 12.5 and 14.3).

TIMBER:

Planned logging systems design for this unit is running skyline and shovel. Confirm final road and landing locations.

WILDLIFE:

Marten guidelines apply: maintain 10-20% of canopy, average 4 large trees/acre (20-30"+), average 3 snags per acre, average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

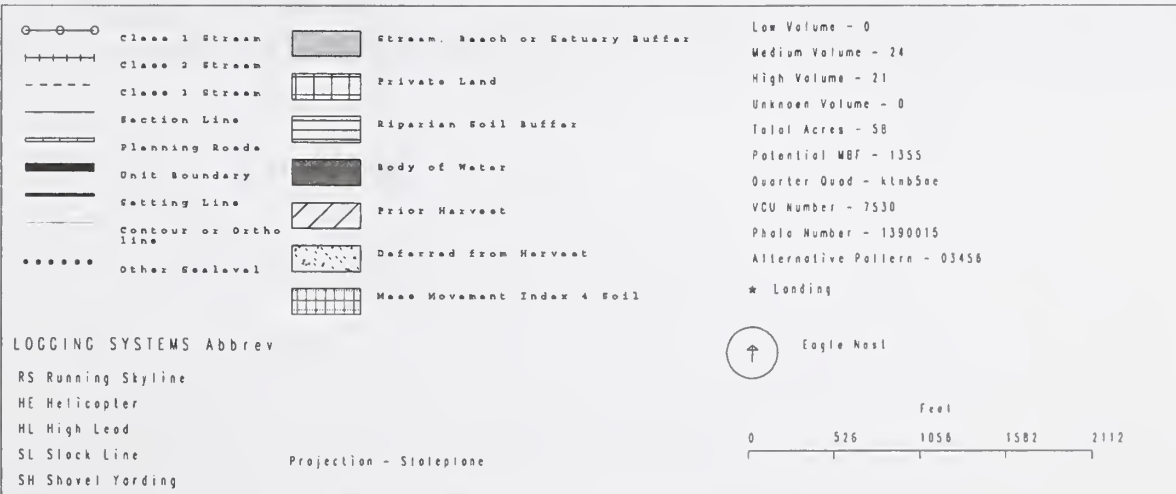
Sealevel Study Area Unit Schematic - Draft Unit 230

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, //efiles/cel/libray/gis/sealevel/draftcard4/draftcard4.mxd



Note: Compiled from various digital geographic data. This map may not meet National Map Accuracy Standards



Unit Data Card - Sea Level Draft EIS

Unit Number:	231	Planned Acres:	35.5	Silvicultural Systems:	CC, DEF	In Alternatives:	2, 3, 4, 5, 6
LUD:	ML	Harvest Acres:	23.7	Management Area:	K35	VCU Number:	7530
Primary Watershed Code:	E77A	Primary WAA Number:	405	Quad:	ktnb5ne	Photo:	1390-16
Number of Settings:	7	Logging System:	RS	Total Estimated Harvest Volume (MBF):	700.6		

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	35.5	Cedar:	0.0	Mixed Hem/Spr:	0.0	Nonforested:	0.0	
Site Productivity Classes	Low:	0.1	Medium:	7.3	High:	28.1	Primary Aspect:				E
Volume Strata	Low:	0.0	Medium:	4.8	High:	30.6	Noncommercial:	0.1	Primary ROS Code: SPNM		
Visuals	Seen:	19.4	Not Seen:	4.3							
VQOs	PR:	0.0	MM:	4.3	M:	19.4	P:	0.0	R:	0.0	
VAC Rating	Low:	0.0	Intermediate:	21.5	High:	14.0	Roadless:				23.7
Mass Movement Index	Low:	35.5	Medium:	0.0	High:	0.0	Very High:	0.0	Slopes Greater Than 72%:		0.0
Wetland Type	Forested Wetland:		23.6	Scrub-Shrub Muskeg:		1.2					
TLMP High Value Marten Habitat	30.5										

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS:

No concerns.

FISH/WATERSHED:

Class I MC2 east: Greater of 120 foot or RMA (top of V-notch) buffer required.
Class II (direct) HC2 south: Greater of 100 foot or RMA (top of V-notch) buffer required.
Class II (direct) HC2 north: Greater of 100 foot or RMA (top of V-notch) buffer required

GEOLOGY:

No concerns.

LANDS:

No concerns.

RECREATION/VISUALS:

No concerns.

SILVICULTURE:

Highly productive. Clearcut harvest 24 acres. Stand should regenerate naturally. Harvest deferred on 11.5 acres to meet Marten standards (see wildlife). CT 10/22/97

SOILS:

The southern part of this unit is made up of forested wetlands and some scrub-shrub muskeg wetland (BMP 12.5). Use a low impact logging system which provides at least partial log suspension when yarding (BMP 13.9). Much of this unit would be suitable for shovel yarding (BMP 13.9). Use overlay road construction and minimize side ditching, where practical, to minimize the effects upon ground-water flow and alteration of wetness (BMPs 12.5 and 14.3).

TIMBER:

Planned logging systems design for this unit is Running Skyline. Confirm final road and landing locations.

WILDLIFE:

Marten guidelines apply: maintain 10-20% of canopy, average 4 large trees/acre (20-30"+), average 3 snags per acre, average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

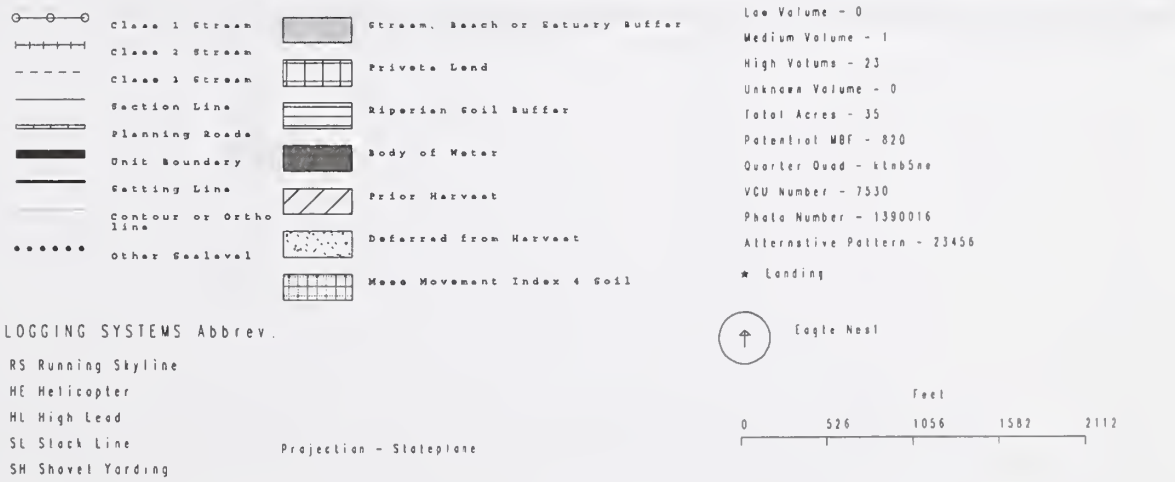
Sealevel Study Area Unit Schematic - Draft Unit 231

Mpscale 1:12000 (5 inch to Mile)

Created 11-17-1997, //files/rel/library/gis/sealevel/draftcard4/draftcard.mxd



Notes: Compiled from various digital geographic data. This map may not meet National Map Accuracy Standards



Unit Data Card - Sea Level Draft EIS

Unit Number:	232	Planned Acres:	46.6	Silvicultural Systems:	CC, DEF	In Alternatives:	2, 3, 4, 5, 6
LUD:	ML	Harvest Acres:	35.7	Management Area:	K35	VCU Number:	7530
Primary Watershed Code:	E77A	Primary WAA Number:	405	Quad:	ktnb5ne	Photo:	1390-16
Number of Settings:	6	Logging Systems:	RS, SL	Total Estimated Harvest Volume (MBF):	1,059.0		

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	46.6	Cedar:	0.0	Mixed Hem/Spr:	0.0	Nonforested:	0.0	
Site Productivity Classes	Low:	0.1	Medium:	0.0	High:	46.5	Primary Aspect:				E
Volume Strata	Low:	0.0	Medium:	2.9	High:	43.8	Noncommercial:	0.0	Primary ROS Code: SPNM		
Visuals	Seen:	35.7	Not Seen:	0.0							
VQOs	PR:	0.0	MM:	0.0	M:	35.7	P:	0.0	R:	0.0	
VAC Rating	Low:	0.0	Intermediate:	44.8	High:	1.8	Roadless:				35.7
Mass Movement Index	Low:	0.0	Medium:	46.6	High:	0.0	Very High:	0.0	Slopes Greater Than 72%:	0.0	
Wetland Type	Forested Wetland:			10.8							
TLMP High Value Marten Habitat	42.1										

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS: No Concerns

FISH/WATERSHED:

Class II (direct) HC2 east: Greater of 100 foot or RMA (top of V-notch) buffer required.
Class II (direct) HC2 south: Greater of 100 foot or RMA (top of V-notch) buffer required.
Class III HC6 west: Sideslope S&G buffer to form unit boundary.

GEOLOGY:

No concerns.

LANDS:

No concerns.

RECREATION/VISUALS:

No concerns.

SILVICULTURE:

Highly productive. Clearcut harvest 36 acres. Stand should regenerate naturally. Harvest deferred on 10.6 acres to meet Marten standards (see wildlife). CT 10/22/97

SOILS:

The southern part of this unit contains about 11 acres of forested wetlands (BMP 12.5). Use a low impact logging system which provides at least partial log suspension when yarding (BMP 13.9). Much of this unit would be suitable for shovel yarding (BMP 13.9). Use overlay road construction and minimize side ditching, where practical, to minimize the effects upon ground-water flow and alteration of wetness (BMPs 12.5 and 14.3).

TIMBER:

Planned logging systems design for this unit is running skyline and slackline. Confirm final road and landing locations.

WILDLIFE:

Marten guidelines apply: maintain 10-20% of canopy, average 4 large trees/acre (20-30"+), average 3 snags per acre, average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 232

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, J:\files\ref\library\gis\scalex6\draftcard\draftcard.mxd



A B C D E F G H I J K L M N O P Q R S T U V W X Y Z



Note: Compiled from various digital geographic data. This map may not meet National Map Accuracy Standards

	Class 1 Stream		Stream, Beach or Refugary Buffer
	Class 2 Stream		Private Land
	Class 3 Stream		Riparian Soil Buffer
	Section Line		Body of Water
	Planning Roads		Prior Harvest
	Unit Boundary		Deferred from Harvest
	Settling Line		Mass Movement Index 4 Soil
	Contour or Ortho line		
	Other Sealevel		

Low Volume - 0
 Medium Volume - 1
 High Volume - 35
 Unknown Volume - 0
 Total Acres - 47
 Potential WBF - 1240
 Quarter Quad - 4145Sne
 VCU Number - 7530
 Photo Number - 1390016
 Alternative Pattern - 23456
 * Landing

LOGGING SYSTEMS Abbrev.

RS Running Skyline
 HE Helicopter
 HL High Lead
 SL Stock line
 SH Shovel Yarding

Projection - Stateplane



Eagle Nest



Unit Data Card - Sea Level Draft EIS

Unit Number:	234	Planned Acres:	28.5	Silvicultural Systems:	CC, DEF	In Alternatives:	2, 3, 4, 5, 6
LUD:	TP	Harvest Acres:	19.8	Management Area:	K35	VCU Number:	7530
Primary Watershed Code:	E77A	Primary WAA Number:	405	Quad:	ktnb5ne	Photo:	1390-14
Number of Settings:	3	Logging System:	RS	Total Estimated Harvest Volume (MBF):	536.8		

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	28.5	Cedar:	0.0	Mixed Hem/Spr:	0.0	Nonforested:	0.0	
Site Productivity Classes	Low:	0.0	Medium:	4.9	High:	23.7	Primary Aspect:				S
Volume Strata	Low:	0.0	Medium:	16.6	High:	12.0	Noncommercial:	0.0			
Visuals	Seen:	0.0	Not Seen:	19.8					Primary ROS Code:	RM	
VQOs	PR:	0.0	MM:	19.8	M:	0.0	P:	0.0	R:	0.0	
VAC Rating	Low:	0.0	Intermediate:	0.0	High:	28.5	Roadless:				19.8
Mass Movement Index	Low:	28.5	Medium:	0.0	High:	0.0	Very High:	0.0	Slopes Greater Than 72%:	0.1	
Wetland Type	Forested Wetland:		25.1	Scrub-Shrub Muskeg:		1.6					
TLMP High Value Marten Habitat	11.0										

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS:

No Concerns

FISH/WATERSHED:

Class I MMI south: Greater of 120 foot or RMA buffer to form unit boundary.

Class II (direct) HC2 west: Greater of 100 foot or RMA (top of V-notch) buffer to form unit boundary.

GEOLOGY:

No concerns.

LANDS:

No concerns.

RECREATION/VISUALS:

No Concerns

SILVICULTURE:

Highly productive. Clearcut harvest 20 acres. Stand should regenerate naturally. Harvest deferred on 8.5 acres to meet Marten standards (see wildlife). CT 10/22/97

SOILS:

Most of this unit consists of forested wetland (BMP 12.5). Recommend the use of low impact logging systems which minimize ground disturbance and provide partial log suspension when yarding (BMP 13.9). Use overlay road construction and minimize side-ditching where practical to minimize the effects upon ground-water flow and alteration of wetness (BMPs 12.5, 14.3).

TIMBER:

Planned logging systems design for this unit is running skyline. Confirm final road and landing locations.

WILDLIFE:

Marten guidelines apply: maintain 10-20% of canopy, average 4 large trees/acre (20-30"+), average 3 snags per acre, average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 234

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, /s/l/ra/rsl/lib/eng/gis/sealevel/draftcard/draftcard.mxd



Note: Compiled from various digital geographic data. This map may not meet National Map Accuracy Standards



Unit Data Card - Sea Level Draft EIS

Unit Number:	235	Planned Acres:	15.2	Silvicultural Systems:	CC, DEF	In Alternatives:	2, 3, 4, 5, 6
LUD:	ML	Harvest Acres:	12.4	Management Area:	K35	VCU Number:	7530
Primary Watershed Code:	E77A	Primary WAA Number:	405	Quad:	ktnb5ne	Photo:	1390-14
Number of Settings:	7	Logging System:	RS	Total Estimated Harvest Volume (MBF):	336.0		

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	15.2	Cedar:	0.0	Mixed Hem/Spr:	0.0	Nonforested:	0.0		
Site Productivity Classes	Low:	0.0	Medium:	3.1	High:	12.1	Primary Aspect:				E	
Volume Strata	Low:	0.0	Medium:	6.9	High:	8.3	Noncommercial:	0.0	Primary ROS Code:		RM	
Visuals	Seen:	0.0	Not Seen:	15.2	R:							0.0
VQOs	PR:	0.0	MM:	0.0	M:	0.0	P:	0.0	Slopes Greater Than 72%:		0.0	
VAC Rating	Low:	0.0	Intermediate:	0.0	High:	15.2	Roadless:					0.0
Mass Movement Index	Low:	15.2	Medium:	0.0	High:	0.0	Very High:	0.0	Slopes Greater Than 72%:			0.0
Wetland Type	Forested Wetland:			12.5								
TLMP High Value Marten Habitat	8.5											

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS:

No concerns

FISH/WATERSHED:

Class I FP3 east: Greater of 130 foot or floodplain RMA buffer required.

Class II (direct) HC4 north: Greater of 100 foot or RMA (top of V-notch) buffer required.

Class II (direct) HC1 south: Greater of 100 foot or RMA (top of V-notch) buffer required.

GEOLOGY:

No concerns.

LANDS:

No concerns.

RECREATION/VISUALS:

SILVICULTURE:

Highly productive. Clearcut harvest 12 acres. Stand should regenerate naturally. Harvest deferred on 3 acres to meet Marten standards (see wildlife). CT 10/22/97

SOILS:

Most of this unit consists of forested wetland (BMP 12.5). Recommend the use of low impact logging systems which minimize ground disturbance and provide partial log suspension when yarding (BMP 13.9). Use overlay road construction and minimize side-ditching, where practical, to minimize the effects upon ground-water flow and alteration of wetness (BMPs 12.5, 14.3).

TIMBER:

Planned logging systems design for this unit is running skyline. Confirm final road and landing locations.

WILDLIFE:

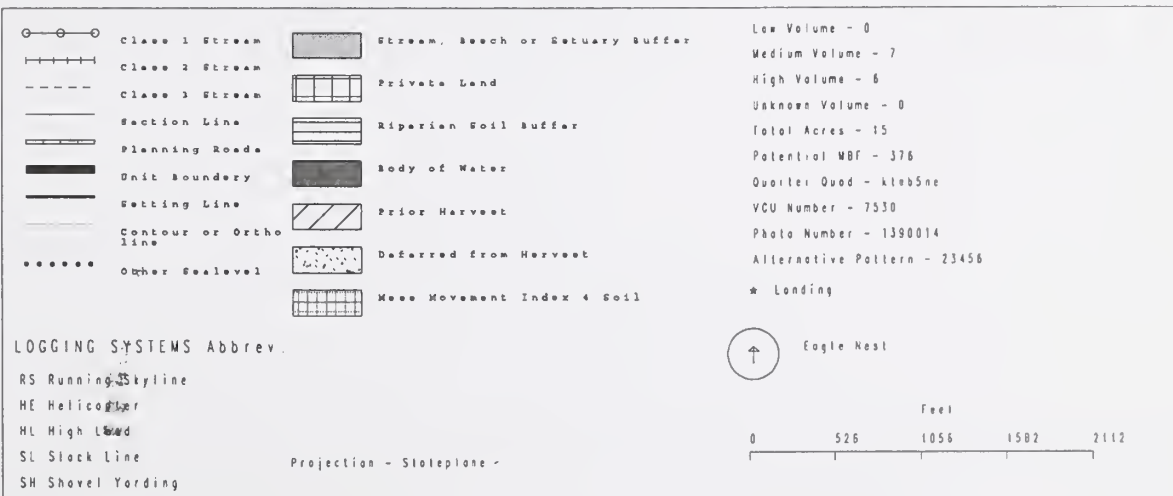
Marten guidelines apply: maintain 10-20% of canopy, average 4 large trees/acre (20-30"+), average 3 snags per acre, average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 235

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, /s:/files/ent/library/gis/sealevel/draftcard/draftcard.mxd



Unit Data Card - Sea Level Draft EIS

Unit Number:	236	Planned Acres:	63.5	Silvicultural Systems:	CC, DEF	In Alternatives:	2, 3, 4, 5, 6
LUD:	TP	Harvest Acres:	59.6	Management Area:	K35	VCU Number:	7530
Primary Watershed Code:	E77A	Primary WAA Number:	405	Quad:	ktnb5ne	Photo:	1390-15
Number of Settings:	8	Logging System:	RS	Total Estimated Harvest Volume (MBF):		1,479.3	

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	63.5	Cedar:	0.0	Mixed Hem/Spr:	0.0	Nonforested:	0.0
Site Productivity Classes	Low:	0.0	Medium:	55.3	High:	8.2	Primary Aspect: SSE			
Volume Strata	Low:	0.2	Medium:	63.3	High:	0.0	Noncommercial:	0.0		
Visuals	Seen:	0.0	Not Seen:	63.5	Primary ROS Code: RM					
VQOs	PR:	0.0	MM:	0.0	M:	0.0	P:	0.0	R:	0.0
VAC Rating	Low:	0.0	Intermediate:	0.0	High:	63.5	Roadless: 0.0			
Mass Movement Index	Low:	0.0	Medium:	63.5	High:	0.0	Very High:	0.0	Slopes Greater Than 72%: 0.1	
Wetland Type			Forested Wetland:	35.5			Scrub-Shrub Muscog:	9.6		
TLMP High Value Marten Habitat	0.0									

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05.1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS:

No concerns.

FISH/WATERSHED:

No concerns.

GEOLOGY:

No concerns.

LANDS:

No concerns.

RECREATION/VISUALS:

SILVICULTURE:

Moderately productive. Clearcut harvest 59 acres. Stand should regenerate naturally. Harvest deferred on 4.5 acres for organic wetland concerns. CT 10/22/97

SOILS:

Much of this unit consists of forested wetland (BMP 12.5). Recommend the use of low impact logging systems which minimize ground disturbance and provide partial log suspension when yarding (BMP 13.9). Use overlay road construction and minimize side-ditching, where practical, to minimize the effects upon ground-water flow and alteration of wetness (BMPs 12.5, 14.3).

TIMBER:

Planned logging systems design for this unit is running skyline. Confirm final road and landing locations.

WILDLIFE:

No wildlife mitigation anticipated for this unit.

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 236

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, //s://files/cel/library/gis/sealevel/draftcard/draftcard.mxd



Unit Data Card - Sea Level Draft EIS

Unit Number:	237	Planned Acres:	24.7	Silvicultural Systems:	CC, DEF	In Alternative:	2
LUD:	TP	Harvest Acres:	20.4	Management Area:	K35	VCU Number:	7530
Primary Watershed Code:	E77A	Primary WAA Number:	405	Quad:	ktnb5ne	Photo:	1390-13
Number of Settings:	7	Logging System:	RS	Total Estimated Harvest Volume (MBF):	506.9		

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	24.7	Cedar:	0.0	Mixed Hem/Spr:	0.0	Nonforested:	0.0
Site Productivity Classes	Low:	0.0	Medium:	0.0	High:	24.7	Primary Aspect: WSW			
Volume Strata	Low:	0.0	Medium:	24.7	High:	0.0	Noncommercial:	0.0		
Visuals	Scen:	0.2	Not Seen:	24.5					Primary ROS Code:	RM
VQOs	PR:	0.0	MM:	0.0	M:	0.0	P:	0.0	R:	0.0
VAC Rating	Low:	1.4	Intermediate:	0.0	High:	23.3	Roadless: 0.0			
Mass Movement Index	Low:	24.7	Medium:	0.0	High:	0.0	Very High:	0.0	Slopes Greater Than 72%:	0.0
Wetland Type			Short Sedge Meadow:	1.8			Forested Wetland:	18.4		
TLMP High Value Marten Habitat	0.0									

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS:

No concerns.

FISH/WATERSHED:

Class I MM1 west: Greater of 120 foot or RMA buffer to form unit boundary.

Class I FP3 north: Greater of 130 foot or RMA buffer.

GEOLOGY:

No concerns.

LANDS:

No concerns.

RECREATION/VISUALS:

SILVICULTURE:

Highly productive. Clearcut harvest 20 acres. Stand should regenerate naturally. Harvest deferred on 4 acres for wildlife concerns. CT 10/22/97

SOILS:

Much of this unit consists of forested wetland (BMP 12.5). There are also some areas of short sedge meadow wetlands included in this unit. Recommend the use of low impact logging systems which minimize ground disturbance and provide partial log suspension when yarding (BMP 13.9). Use overlay road construction and minimize side-ditching, where practical, to minimize the effects upon ground-water flow and alteration of wetness (BMPs 12.5, 14.3).

TIMBER:

Planned logging systems design for this unit is running skyline. Confirm final road and landing locations.

WILDLIFE:

No wildlife mitigation anticipated for this unit.

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 237

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, //files/cal/library/gis/units/6/draftcard/draftcard.mxd



Note: Compiled from various digital geographic data. This map may not meet National Map Accuracy Standards

<ul style="list-style-type: none"> Class 1 Stream Class 2 Stream Class 3 Stream Section Line Planning Roads Unit Boundary Setting Line Contour or Ortho line Other Sealevel 	<ul style="list-style-type: none"> Stream, Beach or Estuary Buffer Private Land Riparian Soil Buffer Body of Water Prior Harvest Deferred from Harvest Mass Movement Index 4 Soil 	<ul style="list-style-type: none"> Low Volume - 0 Medium Volume - 20 High Volume - 0 Unknown Volume - 0 Total Acres - 25 Potential MBF - 535 Quarter Quad - 4445ne VCU Number - 7530 Photo Number - 1390013 Alternative Pattern - 20000 * Landing
--	--	--

LOGGING SYSTEMS Abbrev.

RS Running Skyline

HE Helicopter

HL High Lead

SL Slack Line

SH Shovel Yarding

Projection - Stoleplane

0 526 1056 1582 2112

Feet

Eagle Nest

Unit Data Card - Sea Level Draft EIS

Unit Number:	238	Planned Acres:	13.2	Silvicultural Systems:	CC, DEF	In Alternative:	2
LUD:	TP	Harvest Acres:	11.5	Management Area:	K35	VCU Number:	7530
Primary Watershed Code:	E77A	Primary WAA Number:	405	Quad:	ktnb5ne	Photo:	1390-12
Number of Settings:	5	Logging System:	RS	Total Estimated Harvest Volume (MBF):	341.6		

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	13.2	Cedar:	0.0	Mixed Hem/Spr:	0.0	Nonforested:	0.0
Site Productivity Classes	Low:	0.0	Medium:	0.0	High:	13.2	Primary Aspect: SE			
Volume Strata	Low:	0.0	Medium:	0.0	High:	13.2	Noncommercial:	0.0		
Visuals	Seen:	0.0	Not Seen:	13.2					Primary ROS Code:	RM
VQOs	PR:	0.0	MM:	0.0	M:	0.0	P:	0.0	R:	0.0
VAC Rating	Low:	0.0	Intermediate:	0.0	High:	13.2	Roadless: 0.0			
Mass Movement Index	Low:	13.2	Medium:	0.0	High:	0.0	Very High:	0.0	Slopes Greater Than 72%:	0.0
Wetland Type	Short Sedge Meadow:		0.3	Forested Wetland:			4.8			
TLMP High Value Marten Habitat	13.2									

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS: No Concerns

FISH/WATERSHED:

Class II (direct) HCl west: Greater of 100 foot or RMA (top of V-notch) buffer to form unit boundary.

Class I FP3 south: Greater of 130 foot or RMA buffer required to form unit boundary.

Class II (direct) HCl southeast: Greater of 100 foot or RMA (top of V-notch) to form unit boundary.

GEOLOGY:

No concerns.

LANDS:

No concerns.

RECREATION/VISUALS:

SILVICULTURE:

Highly productive. Clearcut harvest 11.5 acres. Stand should regenerate naturally. Harvest deferred on 2 acres to meet Marten standards (see wildlife). CT 10/22/97

SOILS:

Much of this unit consists of forested wetland (BMP 12.5). There are also some areas of short sedge meadow wetlands included in this unit. Recommend the use of low impact logging systems which minimize ground disturbance and provide partial log suspension when yarding (BMP 13.9). Use overlay road construction and minimize side-ditching, where practical, to minimize the effects upon ground-water flow and alteration of wetness (BMPs 12.5, 14.3).

TIMBER:

Planned logging systems design for this unit is running skyline. Confirm final road and landing locations.

WILDLIFE:

Marten guidelines apply: maintain 10-20 percent of canopy, average 4 large trees/acre (20-30"+), average 3 snags per acre, average 3 pieces downed logs per acre (20-30"+).

Unit is within 0.5 miles of bald eagle nest. Follow Interagency Agreement. Blasting prohibited within 0.5 mile of nest March 1 through May 31. If nest is determined active, blasting prohibited within 0.5 mile of nest June 1 through August 31.

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 238

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, J:\GIS\ext\ref\library\gis\sealevel\draft\card\draftcard.mxd



Note: Compiled from various digital geographic data. This map may not meet National Map Accuracy Standards

- | | | | |
|--|-----------------------|--|---------------------------------|
| | Class 1 Stream | | Stream, Beach or Estuary Buffer |
| | Class 2 Stream | | Private Land |
| | Class 3 Stream | | Riparian Soil Buffer |
| | Section Line | | Body of Water |
| | Planning Road | | Prior Harvest |
| | Unit Boundary | | Deferred from Harvest |
| | Setting Line | | Mass Movement Index 4 Soil |
| | Contour or Ortho line | | |
| | Other Sealevel | | |

Low Volume - 0
 Medium Volume - 0
 High Volume - 11
 Unknown Volume - 0
 Total Acres - 13
 Potential WBF - 401
 Quarter Quad - klobSne
 VCU Number - 7530
 Photo Number - 1390012
 Alternative Pattern - 20000
 * Landing

LOGGING SYSTEMS Abbrev.

RS Running Skyline
 HE Helicopter
 HL High Lead
 SL Slock Line
 SH Shovel Yarding

Projection - Stateplane



Eagle Nest



Unit Data Card - Sea Level Draft EIS

Unit Number:	239	Planned Acres:	11.4	Silvicultural Systems:	CC, DEF	In Alternative:	2
LUD:	TP	Harvest Acres:	6.3	Management Area:	K35	VCU Number:	7530
Primary Watershed Code:	E77A	Primary WAA Number:	405	Quad:	ktnb5ne	Photo:	1390-12
Number of Settings:	2	Logging System:	RS	Total Estimated Harvest Volume (MBF):		189.1	

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	11.4	Cedar:	0.0	Mixed Hem/Spr:	0.0	Nonforested:	0.0	
Site Productivity Classes	Low:	0.0	Medium:	0.0	High:	11.4	Primary Aspect:				S
Volume Strata	Low:	0.0	Medium:	0.0	High:	11.4	Noncommercial:	0.0			
Visuals	Seen:	0.0	Not Seen:	11.4	Primary ROS Code:						RM
VQOs	PR:	0.0	MM:	0.0	M:	0.0	P:	0.0	R:	0.0	
VAC Rating	Low:	0.0	Intermediate:	0.0	High:	11.4	Roadless:				0.0
Mass Movement Index	Low:	11.4	Medium:	0.0	High:	0.0	Very High:	0.0	Slopes Greater Than 72%:		0.0
Wetland Type	Forested Wetland:		11.4								
TLMP High Value Marten Habitat	11.4										

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS:

No concerns.

FISH/WATERSHED:

Class I MM1 south to southwest: Greater of 120 foot or RMA buffer to form unit boundary.

Class II (direct) HC1 east: Greater of 100 foot or RMA buffer (top of V-notch) to form unit boundary.

GEOLOGY:

No concerns.

LANDS:

No concerns.

RECREATION/VISUALS:

SILVICULTURE:

Highly productive. Clearcut harvest 6 acres. Stand should regenerate naturally. Harvest deferred on 5 acres to meet Marten standards (see wildlife). CT 10/22/97

SOILS:

This unit consists of highly productive forested wetlands (BMP 12.5). Use a low impact loggin system which minimizes ground disturbance and provides at least partial log suspension when yarding (BMP 13.9). Use overlay road construction and minimize side-ditching, where practical, to minimize the effects upon ground-water flow and alteration of wetness (BMPs 12.5, 14.3).

TIMBER:

Planned logging systems design for this unit is running skyline. Confirm final road and landing locations.

WILDLIFE:

Marten guidelines apply: maintain 10-20 percent of canopy, average 4 large trees/acre (20-30"+), average 3 snags per acre, average 3 pieces downed logs per acre (20-30"+).

Unit is within 0.5 miles of bald eagle nest. Follow Interagency Agreement. Blasting prohibited within 0.5 mile of nest March 1 through May 31. If nest is determined active, blasting prohibited within 0.5 mile of nest June 1 through August 31.

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 239

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, //s://files/rel/library/gis/sealevel/draftcard/draftcard.mxd



A B C D E F G H I J K L M N O P Q R S T U V W X Y Z



Note: Compiled from various digital geographic data. This map may not meet National Map Accuracy Standards

	Class 1 Stream		Stream, Beach or Estuary Buffer
	Class 2 Stream		Private Land
	Class 3 Stream		Riparian Soil Buffer
	Section Line		Body of Water
	Planning Road		Prior Harvest
	Unit Boundary		Deferred from Harvest
	Setting Line		Mass Movement Index 4 Soil
	Contour or Ortho line		
	Other Sealevel		

Low Volume - 0
 Medium Volume - 0
 High Volume - 6
 Unknown Volume - 0
 Total Acres - 11
 Potential MBF - 222
 Quarter Quad - klnb5ne
 VCU Number - 7530
 Photo Number - 1390012
 Alternative Pattern - 20000
 * Landing

LOGGING SYSTEMS Abbrev.

RS Running Skyline
 HE Helicopter
 HL High Lead
 SL Slack Line
 SH Shovel Yarding

Projection - Spheroplane



Eagle Nest



Unit Data Card - Sea Level Draft EIS

Unit Number:	240	Planned Acres:	55.2	Silvicultural Systems:	CC, DEF	In Alternative:	2
LUD:	ML	Harvest Acres:	43.1	Management Area:	K35	VCU Number:	7530
Primary Watershed Code:	E77A	Primary WAA Number:	405	Quad:	ktnb5ne	Photo:	1390-190
Number of Settings:	10	Logging System:	RS	Total Estimated Harvest Volume (MBF):		1,275.5	

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	55.2	Cedar:	0.0	Mixed Hem/Spr:	0.0	Nonforested:	0.0	
Site Productivity Classes	Low:	0.0	Medium:	8.8	High:	46.4	Primary Aspect:				E
Volume Strata	Low:	0.0	Medium:	14.6	High:	40.6	Noncommercial:	0.0	Primary ROS Code: SPNM		
Visuals	Seen:	55.2	Not Seen:	0.0							
VQOs	PR:	0.0	MM:	0.0	M:	0.0	P:	0.0	R:	0.0	
VAC Rating	Low:	0.0	Intermediate:	55.2	High:	0.0	Roadless:				43.1
Mass Movement Index	Low:	3.2	Medium:	52.0	High:	0.0	Very High:	0.0	Slopes Greater Than 72%:	0.1	
Wetland Type	Forested Wetland:			13.0							
TLMP High Value Marten Habitat	40.2										

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS:

No concerns.

FISH/WATERSHED:

Class III HC6 west : Sideslope S&G buffer (top of V-notch) to form unit boundary.

Class HC5 north: Sideslope S&G buffer (top of V-notch) to form unit boundary.

Class III HC6 northeast : Sideslope S&G buffer (top of V-notch) to form unit boundary.

GEOLOGY:

No concerns.

LANDS:

No concerns.

RECREATION/VISUALS:

SILVICULTURE:

Highly productive. Clearcut harvest 43 acres. Stand should regenerate naturally. Harvest deferred on 12 acres to meet Marten standards (see wildlife). CT 10/22/97

SOILS:

The north part of this unit includes about 13 acres of forested wetland (BMP 12.5). Recommend the use of low impact logging systems which minimize ground disturbance and provide partial log suspension when yarding (BMP 13.9). Use overlay road construction and minimize side-ditching, where practical, to minimize the effects upon ground-water flow and alteration of wetness (BMPs 12.5, 14.3).

TIMBER:

Planned logging systems design for this unit is running skyline. Confirm final road and landing locations.

WILDLIFE:

Marten guidelines apply: maintain 10-20% of canopy, average 4 large trees/acre (20-30"+), average 3 snags per acre, average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 240

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, /data/rel/library/gis/sealevel/draftcard/draftcard.mxd



Note: Compiled from various digital geographic data. This map may not meet National Map Accuracy Standards



Class 1 Stream



Class 2 Stream



Class 3 Stream



Section Line



Planning Road



Unit Boundary



Setting Line



Contour or Ortho line



Other Sealevel



Stream, Beach or Estuary Buffer



Private Land



Riparian Soil Buffer



Body of Water



Prior Harvest



Deferred from Harvest



Mass Movement Index 4 Soil

Low Volume - 0

Medium Volume - 3

High Volume - 41

Unknown Volume - 0

Total Acres - 55

Potential WBF - 1487

Quarter Quad - klnb5ne

VCU Number - 7530

Photo Number - 1390190

Alternative Pattern - 20000

* Landing



Eagle Nest

Feet

0 526 1056 1582 2112

Projection - Stateplane

LOGGING SYSTEMS Abbrev.

RS Running Skyline

HE Helicopter

HL High Lead

SL Stock Line

SH Shovel Yarding

Unit Data Card - Sea Level Draft EIS

Unit Number:	241	Planned Acres:	11.4	Silvicultural Systems:	CC, DEF	In Alternative:	2
LUD:	ML	Harvest Acres:	7.9	Management Area:	K35	VCU Number:	7530
Primary Watershed Code:	E77A	Primary WAA Number:	405	Quad:	ktnb5ne	Photo:	1390-191
Number of Settings:	3	Logging System:	RS	Total Estimated Harvest Volume (MBF):		216.0	

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	11.4	Cedar:	0.0	Mixed Hem/Spr:	0.0	Nonforested:	0.0
Site Productivity Classes	Low:	0.0	Medium:	0.9	High:	10.5	Primary Aspect:			SE
Volume Strata	Low:	0.9	Medium:	6.4	High:	4.1	Noncommercial:	0.0		
Visuals	Seen:	11.4	Not Seen:	0.0	Primary ROS Code:					RM
VQOs	PR:	0.0	MM:	0.0	M:	0.0	P:	0.0	R:	0.0
VAC Rating	Low:	0.0	Intermediate:	11.4	High:	0.0	Roadless:			7.9
Mass Movement Index	Low:	0.9	Medium:	0.0	High:	10.5	Very High:	0.0	Slopes Greater Than 72%:	0.0
Wetland Type			None							
TLMP High Value Marten Habitat		4.0								

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS:

No concerns.

FISH/WATERSHED:

Class III HC6 east: Sideslope S&G buffer (top of V-notch) .

GEOLOGY:

High landslide potential. See Soils for mitigation measures.

LANDS:

Unit is located adjacent to Native land selections. A land line survey will be required before this unit is laid out.

RECREATION/VISUALS:

SILVICULTURE:

Highly productive. Clearcut harvest 8 acres. Stand should regenerate naturally. Harvest deferred on 4 acres to meet Marten standards (see wildlife). CT 10/22/97

SOILS:

The upper part of this unit consists of high landslide potential (MMI=3) soils (BMP 13.5). Recommend the use of a low impact logging system on these steep slopes to minimize ground disturbance and provide at least partial log suspension when yarding (BMP 13.9). Roads have been located to avoid steep, potentially unstable slopes (BMP 14.2).

TIMBER:

Planned logging systems design for this unit is running skyline. Confirm final road and landing locations.

WILDLIFE:

Marten guidelines apply: maintain 10-20 percent of canopy, average 4 large trees/acre (20-30"+), average 3 snags per acre, average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

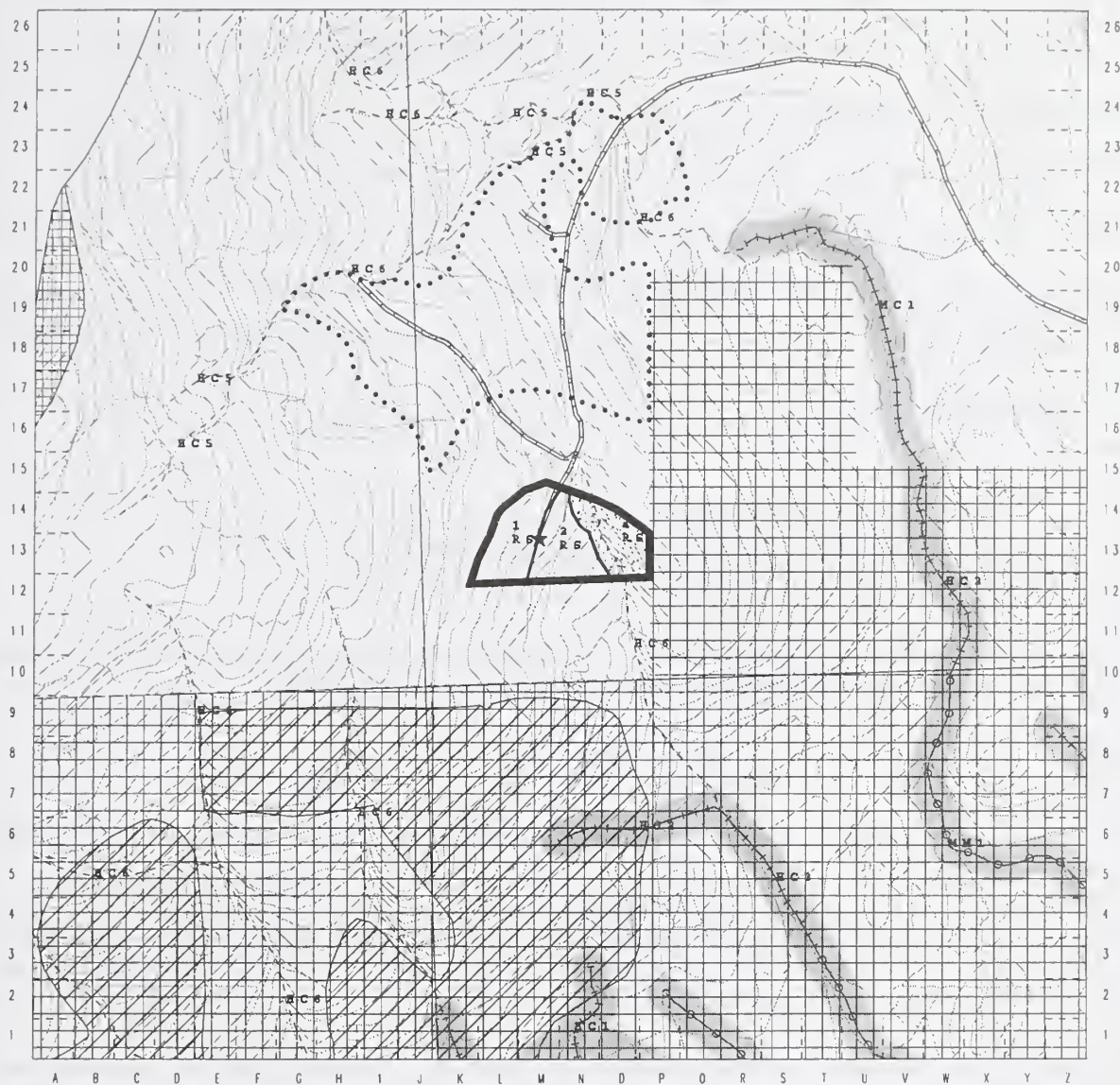
Sealevel Study Area Unit Schematic - Draft Unit 241

Mopscote 1:12000 (5 inch to Mile)

Created 11-17-1997, //sites/rel/library/gie/eelev6/drelcard/drelcard.eml



A B C D E F G H I J K L M N O P O R S T U V W X Y Z



Note: Compiled from various digital geographic data. This map may not meet National Map Accuracy Standards.



Unit Data Card - Brand X Timber Sale (Formally Sea Level Draft EIS)

Unit: 242 Unit Ac. 62
Harvest Ac: 23 Quad: KTNB4NW Mgt. Area: K35
Deferred Ac. 39
Photo: 1390-84
Timber Sale: Brand X Aspect: East LUD: Timber Production VCU: 753
Elevation: Between 400 and 700 feet
TTRA Buffer Certification: _____

Approved:

District Ranger (Jimmy J. DeHerrera)

Date

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS:

No concerns.

FISH/WATERSHED:

Stream 1a, Class II TTRA MMI north of unit 242-B. 120 foot no-cut buffer required.
Stream 2c, Class IV HC5 transects and borders unit 242-B. Split yard or partial suspension required.
Stream 3c, Class IV HC5 borders unit 242-A. Fell trees away from stream and into unit.

GEOLOGY:

High landslide potential. See Soils for mitigation measures. Much of this unit is underlain by erodible deposits of volcanic cinders and ash. Minimize ground disturbance and cut and fill slopes to the extent possible.

LANDS:

No concerns.

RECREATION/VISUALS:

This unit will not affect any existing or planned recreation site or place. This unit will not be visible from saltwater; meets a Maximum Modification VQO.

SILVICULTURE:

Harvest 23 acres using individual tree selection and a small patch cut. 7 acres will be harvested using a patch cut system with the remaining 16 acres being harvested using individual tree selection. The prescription will be designed to achieve silvicultural objectives while meeting the TLMP Marten standards and guidelines. Natural regeneration should be adequate.

SOILS:

Most of this unit consists of high landslide potential (MMI=3) soils (BMP 13.5). Use a low impact logging system which minimizes ground disturbance and provides at least partial log suspension when yarding (BMP 13.9). Roads have been located to avoid these steep, potentially unstable slopes (BMP 14.2). This unit contains 2.8 acres of slopes greater than 72 percent slopes. These steep slopes were evaluated by the IDT soil scientist and classified as suitable for timber harvest (BMP 13.2).

TIMBER:

242 A 9 acres will require 700 feet of temporary road and will be shovel yarded. 242 B has 7 acres of patch cut and 7 acres of selective cut to be marked by the logging contractors and will require 150 feet of temporary road.

WILDLIFE:

Marten guidelines apply: maintain 10-20% of canopy, average 4 large trees/acre (20-30"+), average 3 pieces downed logs per acre (20-30"+).

**NO MAP AVAILABLE
THIS PAGE LEFT BLANK INTENTIONALLY**

Unit Data Card - Sea Level Draft EIS

Unit Number:	243	Planned Acres:	14.2	Silvicultural Systems:	CC, DEF	In Alternatives:	2, 3, 4
LUD:	ML	Harvest Acres:	11.1	Management Area:	K35	VCU Number:	7460
Primary Watershed Code:	115A	Primary WAA Number:	405	Quad:		Photo:	1390-88
Number of Settings:	2	Logging System:	RS	Total Estimated Harvest Volume (MBF):			528.4

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	0.7	Cedar:	0.0	Mixed Hem/Spr:	13.5	Nonforested:	0.0
Site Productivity Classes	Low:	0.0	Medium:	0.0	High:	14.2			Primary Aspect:	S
Volume Strata	Low:	0.0	Medium:	0.7	High:	13.4	Noncommercial:	0.1		
Visuals	Seen:	10.9	Not Seen:	3.2					Primary ROS Code:	RM
VQOs	PR:	0.0	MM:	0.0	M:	0.0	P:	0.0	R:	0.0
VAC Rating	Low:	0.0	Intermediate:	3.5	High:	10.7			Roadless:	0.0
Mass Movement Index	Low:	0.0	Medium:	13.3	High:	0.9	Very High:	0.0	Slopes Greater Than 72%:	0.9
Wetland Type	None									
TLMP High Value Marten Habitat	13.2									

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS:

No concerns.

FISH/WATERSHED:

Class II (direct) HC2 east: Greater of 100 foot or RMA (top of V-notch) buffer required.

Class III HC6 center: Sideslope S&G buffer (top of V-notch) required.

GEOLOGY:

High landslide potential. See Soils for mitigation measures.

LANDS:

No concerns.

RECREATION/VISUALS:

SILVICULTURE:

Highly productive. Clearcut harvest 11 acres. Stand should regenerate naturally. Harvest deferred on 3 acres to meet Marten standards (see wildlife). CT 10/22/97

SOILS:

A small area of high landslide potential soil (MMI=3) is located in the north end of this unit (BMP 13.5). Recommend the use of a low impact logging system on these steep slopes to minimize ground disturbance and provide at least partial log suspension when yarding (BMP 13.9). Roads have been located to avoid steep, potentially unstable slopes (BMP 14.2). About an acre of this unit consist of slopes greater than 72 percent. This slope was placed in a deferral area.

TIMBER:

Planned logging systems design for this unit is running skyline and live skyline. Confirm final road and landing locations.

WILDLIFE:

Marten guidelines apply: maintain 10-20 percent of canopy, average 4 large trees/acre (20-30"+), average 3 snags per acre, average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 243

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, /atlanta/atl/library/gis/sealevel/draftcard/draftcard.mxd



Note: Compiled from various digital geographic data. This map may not meet National Map Accuracy Standards



Unit Data Card - Sea Level Draft EIS

Unit Number:	244	Planned Acres:	6.8	Silvicultural System:	CC	In Alternative:	2
LUD:	ML	Harvest Acres:	6.8	Management Area:	K35	VCU Number:	7460
Primary Watershed Code:	D87A	Primary WAA Number:	405	Quad:		Photo:	1390-88
Number of Settings:	1	Logging System:	LS	Total Estimated Harvest Volume (MBF):		169.2	

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	6.8	Cedar:	0.0	Mixed Hem/Spr:	0.0	Nonforested:	0.0	
Site Productivity Classes	Low:	0.0	Medium:	0.0	High:	6.8	Primary Aspect:				S
Volume Strata	Low:	0.0	Medium:	6.8	High:	0.0	Noncommercial:	0.0			
Visuals	Seen:	6.8	Not Seen:	0.0					Primary ROS Code:	RM	
VQOs	PR:	0.0	MM:	0.0	M:	0.0	P:	0.0	R:	0.0	
VAC Rating	Low:	0.0	Intermediate:	6.8	High:	0.0	Roadless:				0.0
Mass Movement Index	Low:	0.0	Medium:	0.0	High:	6.8	Very High:	0.0	Slopes Greater Than 72%:	1.5	
Wetland Type	None										
TLMP High Value Marten Habitat	0.0										

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS:

No concerns.

FISH/WATERSHED:

No concerns.

GEOLOGY:

High landslide potential. See Soils for mitigation measures.

LANDS:

No concerns.

RECREATION/VISUALS:

SILVICULTURE:

Highly productive. Clearcut harvest 6.8 acres. Stand should regenerate naturally. CT 10/22/97

SOILS:

This unit consists of high landslide potential (MMI=3) soils (BMP 13.5). Recommend the use of a low impact logging system on these steep slopes to minimize ground disturbance and provide at least partial log suspension when yarding (BMP 13.9). Roads have been located to avoid steep, potentially unstable slopes (BMP 14.2). About 1.5 acres of this unit consist of slopes greater than 72 percent. An on-site analysis of these slopes by the IDT soil scientist determined that the risk of potential impacts of accelerated erosion on downslope and downstream fish habitat, other beneficial uses of water and other resources was minimal and these slopes are included within the timber harvest unit (BMP 13.2).

TIMBER:

Planned logging systems design for this unit is live skyline. Confirm final road and landing locations.

WILDLIFE:

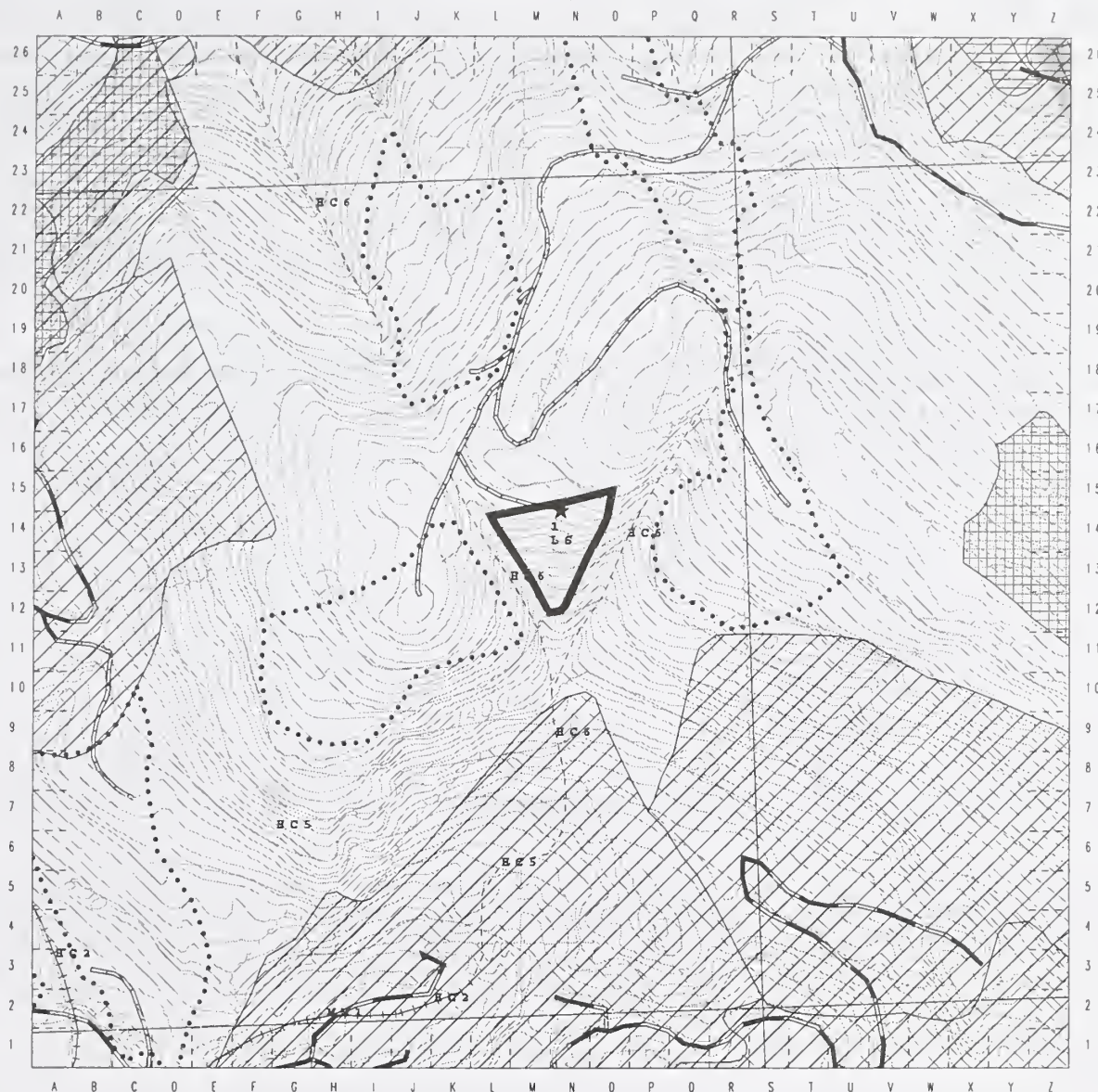
No wildlife mitigation anticipated for this unit.

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 244

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, //s://files/csl/library/gis/sealevel8/draftcard4/draftcard.unl



Note: Compiled from various digital geographic data. This map may not meet National Map Accuracy Standards



Unit Data Card - Sea Level Draft EIS

Unit Number:	245	Planned Acres:	8.5	Silvicultural Systems:	ITM, DEF	In Alternative:	none
LUD:	TP	Harvest Acres:	5.4	Management Area:	K35	VCU Number:	7460
Primary Watershed Code:	114A	Primary WAA Number:	405	Quad:		Photo:	1390-89
Number of Settings:	2	Logging System:	HE	Total Estimated Harvest Volume (MBF):			81.1

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	8.5	Cedar:	0.0	Mixed Hem/Spr:	0.0	Nonforested:	0.0
Site Productivity Classes	Low:	0.0	Medium:	8.5	High:	0.0			Primary Aspect:	S
Volume Strata	Low:	0.0	Medium:	0.0	High:	8.5	Noncommercial:	0.0		
Visuals	Seen:	8.5	Not Seen:	0.0					Primary ROS Code:	RM
VQOs	PR:	0.0	MM:	0.0	M:	0.0	P:	0.0	R:	0.0
VAC Rating	Low:	0.0	Intermediate:	8.5	High:	0.0			Roadless:	0.0
Mass Movement Index	Low:	0.0	Medium:	0.0	High:	8.5	Very High:	0.0	Slopes Greater Than 72%:	3.3
Wetland Type	None									
TLMP High Value Marten Habitat	8.5									

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS:

No concerns.

FISH/WATERSHED:

No concerns.

GEOLOGY:

High landslide potential. See Soils for mitigation measures.

LANDS:

No concerns.

RECREATION/VISUALS:

SILVICULTURE:

Moderately productive. Helicopter harvest 5 acres using a diameter limit prescription. Defer harvest on 3 acres to meet Marten standards (see wildlife). CT 10/21/97

SOILS:

This unit consists of high landslide potential (MMI=3) soils (BMP 13.5). The use of a helicopter logging system on these steep slopes will minimize ground disturbance and provide full log suspension when yarding (BMP 13.9). Roads have been located to avoid steep, potentially unstable slopes (BMP 14.2). This unit contain 3.3 acres of slopes greater than 72 percent. Two of these steep slopes acres were placed in deferral areas by the IDT (BMP 13.5). An on-site analysis of the other slopes by the IDT soil scientist determined that the risk of potential impacts of accelerated erosion on down-slope and down-stream fish habitat, other beneficial uses of water and other resources was minimal and these slopes are included within the timber harvest unit (BMP 13.2).

TIMBER:

Planned logging systems design for this unit is helicopter.

WILDLIFE:

Marten guidelines apply: maintain 10-20 percent of canopy, average 4 large trees/acre (20-30"+), average 3 snags per acre, average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

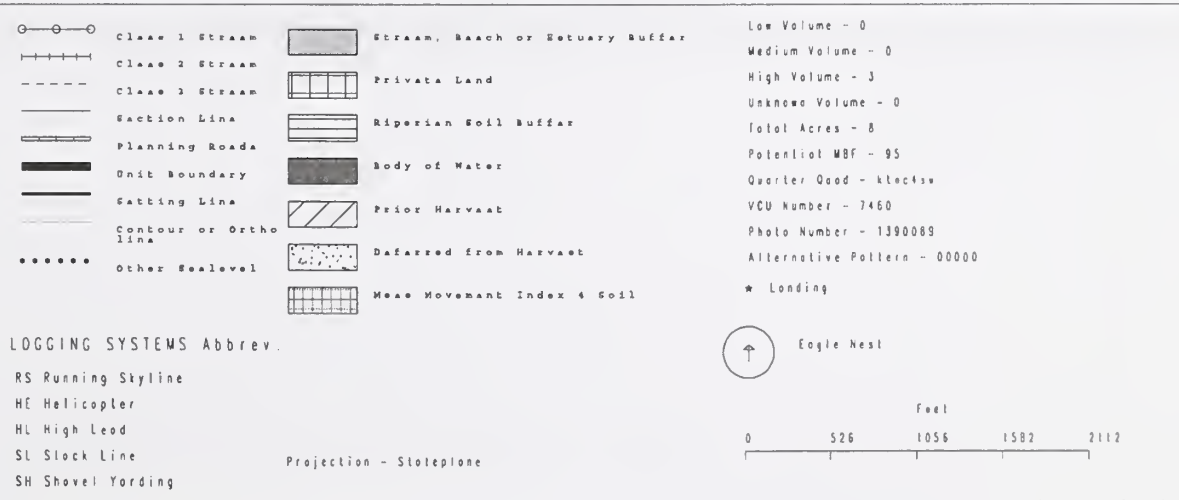
Sealevel Study Area Unit Schematic - Draft Unit 245

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, //s://files/csl/library/gis/sealevel/draftcard/draftcard.dmi



Note: Compiled from various digital geographic data. This map may not meet National Map Accuracy Standards



Unit Data Card - Sea Level Draft EIS

Unit Number:	246	Planned Acres:	34.5	Silvicultural Systems:	CC, DEF	In Alternatives:	2, 3
LUD:	TP	Harvest Acres:	23.6	Management Area:	K35	VCU Number:	7550
Primary Watershed Code:	E79A	Primary WAA Number:	405	Quad:		Photo:	1390-160
Number of Settings:	3	Logging System:	RS	Total Estimated Harvest Volume (MBF):			664.6

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	34.5	Cedar:	0.0	Mixed Hem/Spr:	0.0	Nonforested:	0.0
Site Productivity Classes	Low:	0.5	Medium:	0.2	High:	33.8			Primary Aspect:	E
Volume Strata	Low:	0.3	Medium:	9.2	High:	25.0	Noncommercial:	0.0		
Visuals	Seen:	0.0	Not Seen:	34.5					Primary ROS Code:	RM
VQOs	PR:	0.0	MM:	0.0	M:	0.0	P:	0.0	R:	0.0
VAC Rating	Low:	0.0	Intermediate:	0.0	High:	34.5			Roadless:	0.0
Mass Movement Index	Low:	0.0	Medium:	34.0	High:	0.5	Very High:	0.0	Slopes Greater Than 72%:	0.0
Wetland Type			Forested Wetland:	22.2			Tall Sedge Fen:	0.3		
TLMP High Value Marten Habitat				17.0						

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS:

No concerns.

FISH/WATERSHED:

Class I MMI east: Greater of 120 foot or RMA buffer to form unit boundary.

Class II (direct) PA1 west: Greater of 100 or RMA buffer to form unit boundary.

GEOLOGY:

High landslide potential. See Soils for mitigation measures.

LANDS:

No concerns.

RECREATION/VISUALS:

SILVICULTURE:

Highly productive. Clearcut harvest 23.6 acres. Stand should regenerate naturally. Harvest deferred on 10.9 acres to meet Marten standards(see wildlife). CT 10/22/97

SOILS:

Most of this unit consists of medium landslide potential (MMI=3) soils (BMP 13.5). The south part of this unit consists of about 22 acres of forested wetland (BMP 12.5). Use a low impact logging system that minimizes ground disturbance and provides at least partial log suspension when yarding on wetlands and high landslide potential soils (BMP 13.9). Limit blasting for road construction and rock pit development when the soil is saturated (BMP 14.6). On wetlands, use overlay road construction and minimize side ditching, where practicable, to minimize the effects upon groundwater flow (BMPs 12.5 and 14.3). Avoid the use of these wetlands for the disposal of waste material or other fill (BMP 14.19).

TIMBER:

WILDLIFE:

Marten guidelines apply: maintain 10-20% of canopy, average 4 large trees/acre (20-30"+), average 3 snags per acre, average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 246

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, /data/rel/library/gis/sealevel3/draftcard/draftcard.mxd



Note: Compiled from various digital geographic data. This map may not meet National Map Accuracy Standards



Unit Data Card - Sea Level Draft EIS

Unit Number:	250	Planned Acres:	20.5	Silvicultural Systems:	CC, ITM, DEF	In Alternatives:	2, 3
LUD:	TP	Harvest Acres:	8.4	Management Area:	K35	VCU Number:	7560
Primary Watershed Code:	E69A	Primary WAA Number:	405	Quad:	ktnb4sw	Photo:	1390-74
Number of Settings:	5	Logging System:	RS	Total Estimated Harvest Volume (MBF):		304.9	

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	7.9	Cedar:	0.0	Mixed Hem/Spr:	12.5	Nonforested:	0.0		
Site Productivity Classes	Low:	0.0	Medium:	4.2	High:	16.3	Primary Aspect:				E	
Volume Strata	Low:	0.0	Medium:	0.0	High:	19.3	Noncommercial:	1.2	Primary ROS Code:			RM
Visuals	Seen:	0.0	Not Seen:	20.5								
VQOs	PR:	0.0	MM:	0.0	M:	0.0	P:	0.0	R:	0.0		
VAC Rating	Low:	0.0	Intermediate:	2.0	High:	18.5	Roadless:					0.0
Mass Movement Index	Low:	20.5	Medium:	0.0	High:	0.0	Very High:	0.0	Slopes Greater Than 72%:			0.0
Wetland Type	Forested Wetland:		12.9									
TLMP High Value Marten Habitat	19.5											

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS:

No concerns.

FISH/WATERSHED:

Class I HC3 north: 100 foot buffer required.

Class I FP4 northwest: Greater of 130 foot or floodplain RMA buffer required.

Class II (direct) MM1 south: Greater of 120 foot or RMA buffer required.

Class III HC5 south: Sideslope S&G buffer to form unit boundary.

GEOLOGY:

No concerns.

LANDS:

No concerns.

RECREATION/VISUALS:

SILVICULTURE:

Highly productive. Use small patch cuts to harvest 3 acres. Leave approximately 6 acres unharvested to meet Marten standards (see wildlife). Harvest remainder of unit using individual tree selection with a prescription designed to meet silvicultural objectives while meeting Marten standards. Patches should regenerate naturally. CT 10/21/97

SOILS:

The central two-thirds of this unit consists of forested wetlands (BMP 12.5). Use a low impact logging system on these wetlands which minimizes ground surface disturbance and provides at least partial log suspension when yarding (BMP 13.9). Use overlay road construction and minimize side-ditching, where practical, to minimize the effects upon ground-water flows (BMPs 12.5 and 14.3).

TIMBER:

Planned logging systems design for this unit is running skyline. Confirm final road, landing locations, and yarding corridors.

WILDLIFE:

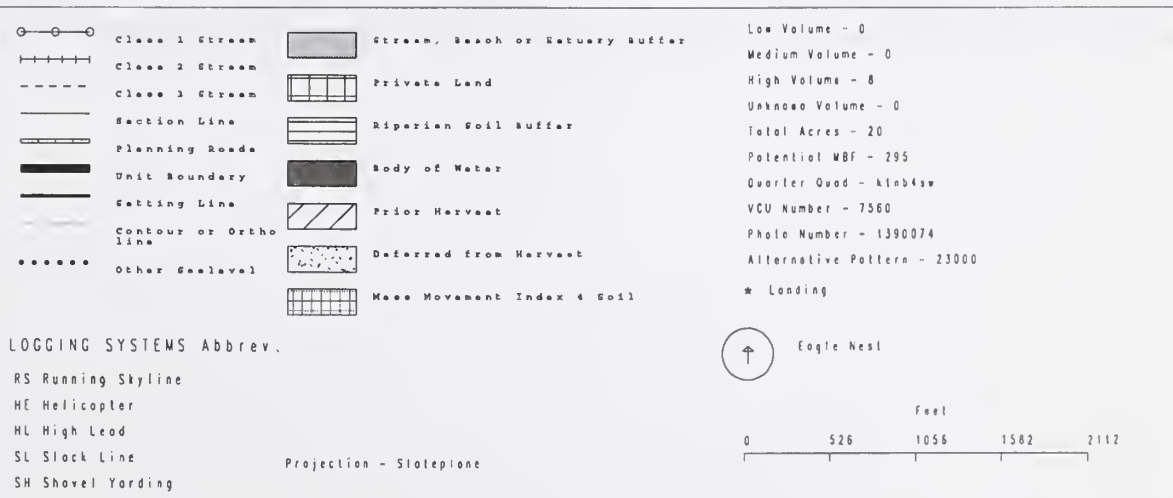
Marten guidelines apply: maintain 30 percent canopy closure, average 8 large trees/acre (20-30"+), average 3 large decadent trees/acre (20-30"+) average 3 pieces downed logs per acre (20-30"+).

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 250

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, //s:/files/real/library/gis/sealevel/draftcard/draftcard.mxd



Unit Data Card - Sea Level Draft EIS

Unit Number:	318	Planned Acres:	16.9	Silvicultural System:	CC	In Alternatives:	2, 3, 4, 5
LUD:	TP	Harvest Acres:	16.9	Management Area:	K35	VCU Number:	7530
Primary Watershed Code:	EZ2A	Primary WAA Number:	405	Quad:	ktnb4sw	Photo:	1390-80
Number of Settings:	5	Logging Systems:	RS, SH	Total Estimated Harvest Volume (MBF):	419.3		

PHYSICAL DESCRIPTION

Forest Type	Spruce:	0.0	Hemlock:	16.9	Cedar:	0.0	Mixed Hem/Spr:	0.0	Nonforested:	0.0	
Site Productivity Classes	Low:	0.0	Medium:	16.9	High:	0.0	Primary Aspect:				W
Volume Strata	Low:	16.9	Medium:	0.0	High:	0.0	Noncommercial:	0.0			
Visuals	Seen:	0.0	Not Seen:	16.9	Primary ROS Code:						RM
VQOs	PR:	0.0	MM:	0.0	M:	0.0	P:	0.0	R:	0.0	
VAC Rating	Low:	0.0	Intermediate:	0.0	High:	16.9	Roadless:				0.0
Mass Movement Index	Low:	16.9	Medium:	0.0	High:	0.0	Very High:	0.0	Slopes Greater Than 72%:	0.0	
Wetland Type	Forested Wetland:		7.2								
TLMP High Value Marten Habitat	0.0										

Notes: These numbers are acres unless otherwise specified.

The data is derived from digital geographic data and so the coverages may not meet National Map Accuracy Standards.

CULTURAL RESOURCES:

No concerns for cultural resources. rpt 1995-05-05, 1/30/95 SHPO ltr 2/21/95 rpt 1995-05-05 add 1, 11/3/95 SHPO ltr 1/2/96 RAL

ENGINEERING/ROADS:

No concerns.

FISH/WATERSHED:

Class II (non-direct) MM1 northwest. Greater of 120 foot or RMA buffer required.
Class II (non-direct) MC1 southeast: Greater of 100 foot or RMA (top of sideslope) buffer required.
Class II (non-direct) PA2 and PA5 west: RMA buffer required.
Class III PA1 center: RMA buffer, split yard or full suspension required.

GEOLOGY:

No concerns.

LANDS:

No concerns.

RECREATION/VISUALS:

SILVICULTURE:

Moderately productive. Clearcut harvest 16.9 acres. Plant 3 acres with AYC the remainder of the stand should regenerate naturally. CT 10/23/97

SOILS:

The northern and southern ends of this unit include about 7 acres of forested wetlands (BMP 12.5). Use a low impact logging system on these wetlands which minimizes ground surface disturbance and provides at least partial log suspension when yarding (BMP 13.9). Use overlay road construction and minimize side-ditching, where practical, to minimize the effects upon ground-water flows (BMPs 12.5 and 14.3).

TIMBER:

Planned logging system design for this unit is running skyline and shovel. Confirm final road and landing locations. Verify feasibility of split yarding Class III stream within unit and adjust roads, landings, or modify unit boundary if required.

WILDLIFE:

No wildlife mitigation anticipated for this unit.

Unit Data Card - Sea Level Draft EIS

Sealevel Study Area Unit Schematic - Draft Unit 318

Mapscale 1:12000 (5 inch to Mile)

Created 11-17-1997, //atlantis/csl/1-brary/gis/sealevel/draftcard/draftcard.mxd



Note: Compiled from various digital geographic data. This map may not meet National Map Accuracy Standards

- | | | | |
|--|-----------------------|--|---------------------------------|
| | Class 1 Stream | | Stream, Beach or Estuary Buffer |
| | Class 2 Stream | | Private Land |
| | Class 3 Stream | | Riparian Soil Buffer |
| | Section Line | | Body of Water |
| | Planning Roads | | Prior Harvest |
| | Unit Boundary | | Deferred from Harvest |
| | Setting Line | | Mass Movement Index 4 Soil |
| | Contour or Ortho line | | |
| | Other Sealevel | | |

LOGGING SYSTEMS Abbrev.

RS Running Skyline
HE Helicopter
HL High Lead
SL Slack Line
SH Shovel Yarding

Projection - Stateplane

Low Volume - 17
Medium Volume - 0
High Volume - 0
Unknown Volume - 0
Total Acres - 17
Potential MBF - 272
Quarter Quad - 144444
VCU Number - 7530
Photo Number - 1390080
Alternative Pattern - 23450
★ Landing



Eagle Nest





Part 2 - Road Cards

THE JOURNAL OF THE
ROYAL ANTHROPOLOGICAL INSTITUTE

Road Cards

Access Management

The Project Area is isolated from other major road systems. Accordingly, only intermittent resource management and off-road vehicular and foot traffic is expected.

During resource management activity, the roads will be maintained commensurate with that activity. After completion of the management activity, the roads will revert to the following maintenance levels:

- Maintenance Level 1 roads are closed by bridge removal or organic encroachment and are monitored for resource protection.
- Maintenance Level 2 roads are maintained for high clearance vehicles and monitored for resource protection.

Accordingly, the road management strategy is as follows:

- All new roads will be closed or blocked to public vehicle use.
- Main trunk roads will receive long-term access for forest administration such as future timber or salvage sales, fish pass access, and maintenance and traffic associated with special use permits. Such roads will remain open for high clearance vehicular traffic.

Several roads are expected to be used for long term cyclic forest administrative activities, with minimal use expected, for moderately long periods of time. Accordingly, such roads will be left open for high clearance vehicles. However, the entire road template will be seeded. This will include the road surface and the cut and fill slopes.

Some roads are not anticipated to be needed for any future activities or use. These roads will be closed by eliminating access, including removing all drainage structures, scarifying the roadbed and seeding.

Seeding of the road bed is a technique to retard alder growth, achieve low maintenance costs, and reduce road reactivation costs when re-used for transporting forest products.

Numerous roads are expected to be used intermittently with long periods of non-use. Most modular bridges will be removed upon completion of harvest activities. Other drainage structures will be left in place.

Card Design

The road cards display roads contained in Alternatives 1 through 6 collectively. Accordingly, each alternative may or may not include all of, or portions of, each road displayed.

Some existing roads displayed on the road cards do not reflect stream crossings as drainage structure replacement was not anticipated. Should it be found necessary to replace structures on such roads, the structures will be reconstructed in accordance with pertinent BMPs and design standards as used for new facilities.

Due to map scale, road cards do not reflect many roads ¼ mile and under. See Unit Cards for details concerning such roads.

The Road Card Appendix consists of three separate documents. They are:

- 1) Road Management Objectives
- 2) Definition of Traffic Service levels
- 3) Road Card Maps

Road Data Card

Road Number: 8300000	ROD Road Number: 8300000	M.P.: 19.59	To M.P.: 20.65
Planned Length (miles): 1.06	Actual Length (miles):	New or Reconstruct:	reconstruction
Unit(s) Accessed:	Road Locator:		

ROAD MANAGEMENT OBJECTIVES

Functional Class: arterial	Traffic Service Level: D	Highway Safety Act Number: NO
Design Vehicle: LT	Critical Vehicle: low boy	Intended Purpose and Use: Silvicultural
Maintain Level: Active Sale 2 Post Sale 2	AFRPR STATUS: Active	Closure Device: none
Management Strategy (Encourage, Accept, Discourage, Eliminate or Prohibit): accept	Erosion Control: none	
Other Considerations: Portion of existing Shelter Cove west mainline.		

CULTURAL RESOURCES as planned: No Cultural Concerns JTA 2/5/98
as located: No Cultural Concerns JTA 2/5/98

ENGINEERING/ROADS

Recon/Location Narrative/Design Considerations (major drainages, road grades, future access, etc.): minor reconstruction required.

Planned vs Implemented (describe changes and rational):

Rock Source(s) Location and Special Mitigation: No special concerns. Pits located as shown on map.

FISH HABITAT

No fisheries concerns have been identified during the planning phase on this existing road. An inspection of this road and streamcrossings was completed in 1996 verifying all the drainage structures were functioning properly. An inspections of this road will be conducted in the spring of 1998 to identify any critical maintenance concerns (BMP 11.6).

Stream Crossings As Planned (0 -Class I 0 - Class II 0 - Class III):

Stream Crossings As Located (Class I Class II Class III):

Cataloged Stream Crossings As Located:

GEOLOGY/KARST as planned: No concerns.
as located:

LANDS/MINERALS as planned: No concerns.
as located:

RECREATION/VISUALS as planned: No concerns.
as located:

SILVICULTURE as planned: No Concerns. CT 3/10/98
as located:

SOILS / WATERSHED as planned:

Erosion control seeding of cutbanks and fillslopes should be implemented as soon as possible (BMPs 12.17, 14..8) following reconstruction.

as located:

TIMBER/LOGGING SYSTEM/ADMINISTRATION as planned:No currently identified concerns AMG 3/11/98

as located:

WILDLIFE as planned: No mitigation measures anticipated.

as located:

Ranger's Signature

Date

Road Data Card

Road Number: 8300000

Map Number:

Scale: 1 inch = 1320 feet

Aerial Photo Year:

Line:

Photo Number:



Stream Classes

- Class 1 Streams
- Class 2 Streams
- Class 3 Streams

Roads

- Temp Spur
- Existing Road
- Proposed Road

Wetlands

- High Value Wetlands
- Other Wetlands
- 40' Contours
- Lakes
- Proposed Units
- Shoreline

4 inches = 1 mile



- Fish Passage Provided
- Fish Passage Failure
- Rock Pit
- Existing LTF

Road Data Card

Road Number: 8300300
Planned Length (miles): 1.2 mile roconst 0.20 new
Unit(s) Accessed: 203

ROD Road Number: 8300300
Actual Length (miles):
Road Locator:

M.P.: 0.0 To M.P.: 1.60
New or Reconstruct: new construction

ROAD MANAGEMENT OBJECTIVES

Functional Class: Local Traffic Service Level: D Highway Safety Act Number: NO
Design Vehicle: LT Critical Vehicle: LT Intended Purpose and Use: Silvicultural
Maintain Level: Active Sale 2 Post Sale 1 AFRPR STATUS: closed Closure Device: Barrier
Management Strategy (Encourage, Accept, Discourage, Eliminate or Prohibit): Eliminate Erosion Control: water bar at MP 0.00
Other Considerations:

CULTURAL RESOURCES as planned: No Concerns JTA 2/5/98
as located: No Concerns JTA 2/5/98

ENGINEERING/ROADS

Recon/Location Narrative/Design Considerations (major drainages, road grades, future access, etc.):
Planned vs Implemented (describe changes and rational):
Rock Source(s) Location and Special Mitigation: No special concerns. Pits located as shown on map.

FISH HABITAT

No fisheries concerns have been identified during the planning phase.
Stream Crossings As Planned (0 - Class I 0 - Class II 0 - Class III):
Stream Crossings As Located (Class I Class II Class III):
Cataloged Stream Crossings As Located:

GEOLOGY/KARST as planned:

High landslide potential. See Soils/Watershed for mitigation measures.
as located:

LANDS/MINERALS as planned:

No concerns.
as located:

RECREATION/VISUALS as planned:

Portions of road within Unit 203 are visible from both Saddle Lake and Carroll Inlet - (1) Where full bench cut, endhaul material where slopes are too steep to hold material. (2) Mitigate effects of sidcast and landing area slash, within 30 feet of road shoulders, by endhauling slash to a nonimpacting area, cover with soil and shape to natural contours. WEA 2/23/98
as located:

SILVICULTURE as planned:

No Concerns. CT 3/10/98
as located:

SOILS / WATERSHED as planned:

Erosion control seeding of cutbanks and fillslopes should be implemented as soon as possible (BMPs 12.17, 14.8) following construction..
Much of this road segment consists of high landslide potential (MMI=3) soils (BMP 13.5). Road construction on these steep, potentially unstable slopes may require full-bench design (BMP 14.7). Avoid placing fill on high landslide potential slopes (BMP 14.7). Limit blasting for road construction when the soil is saturated (BMP 14.6). This road segment is located to avoid wetlands (BMPs 12.5, 14.2).
as located:

TIMBER/LOGGING SYSTEM/ADMINISTRATION as planned:

No currently identified concerns AMG 3/11/98
as located:

WILDLIFE as planned:

No mitigation measures anticipated.
as located:

Ranger's Signature

Date

Road Data Card

Road Number: 8300300

Map Number:

Scale: 1 inch = 1320 feet

Aerial Photo

Year: 91

Line:

1390-22 & 23



Stream Classes

- Class 1 Streams
- Class 2 Streams
- Class 3 Streams

Roads

- Temp Spur
- Existing Road
- Proposed Road

Wetlands

- High Value Wetlands
- Other Wetlands
- 40' Contours
- Lakes
- Proposed Units
- Shoreline

4 inches = 1 mile



- Fish Passage Provided
- Fish Passage Failure
- Rock Pit
- Existing LTF

Road Data Card

Road Number: 8300350	ROD Road Number: 8300350	M.P.: 0.0	To M.P.: 0.20
Planned Length (miles): 0.20	Actual Length (miles):	New or Reconstruct:	new construction
Unit(s) Accessed: 203	Road Locator:		

ROAD MANAGEMENT OBJECTIVES

Functional Class: Local	Traffic Service Level: D	Highway Safety Act Number: NO
Design Vehicle: LT	Critical Vehicle: LT	Intended Purpose and Use: Silvicultural
Maintain Level: Active Sale 2 Post Sale 1	AFRPR STATUS: Closed	Closure Device: Barrier
Management Strategy (Encourage, Accept, Discourage, Eliminate or Prohibit): Eliminate		Erosion Control: water bar at MP 0.00
Other Considerations:		

CULTURAL RESOURCES as planned: No Concerns JTA 2/5/98
as located: No Concerns JTA 2/5/98

ENGINEERING/ROADS

Recon/Location Narrative/Design Considerations (major drainages, road grades, future access, etc.): No significant areas with sideslopes over 67% were crossed with the road location.

Planned vs Implemented (describe changes and rational):

Rock Source(s) Location and Special Mitigation: No special concerns. Pits located as shown on map.

FISH HABITAT

No fisheries concerns have been identified during the planning phase.

Stream Crossings As Planned (0 -Class I 0 -Class II 2 - Class III):

Stream Crossings As Located (Class I Class II Class III):

Cataloged Stream Crossings As Located:

GEOLOGY/KARST as planned:

No concerns.

as located:

LANDS/MINERALS as planned:

No concerns.

as located:

RECREATION/VISUALS as planned:

No concerns.

as located:

SILVICULTURE as planned:

No Concerns. CT 3/10/98

as located:

SOILS / WATERSHED as planned:

This road segment crosses areas of low value forested wetlands and scrub-shrub muskeg, and medium value short sedge meadow (BMP 12.5). Alternative road locations to the north and south are on areas of high landslide potential (BMPs 13.5 and 14.2). Use overlay road construction on wetlands and minimize side ditching, where practicable, to minimize the effects upon groundwater flow (BMP 14.3). Erosion control seeding of cutbanks and fillslopes should be implemented as soon as possible (BMPs 12.17, 14.8) following construction.

as located:

TIMBER/LOGGING SYSTEM/ADMINISTRATION as planned:

No currently identified concerns AMG 3/11/98

as located:

WILDLIFE as planned:

No mitigation measures anticipated.

as located:

Ranger's Signature

Date

Road Data Card

Road Number: 8300350

Map Number: KTN C-5 SE

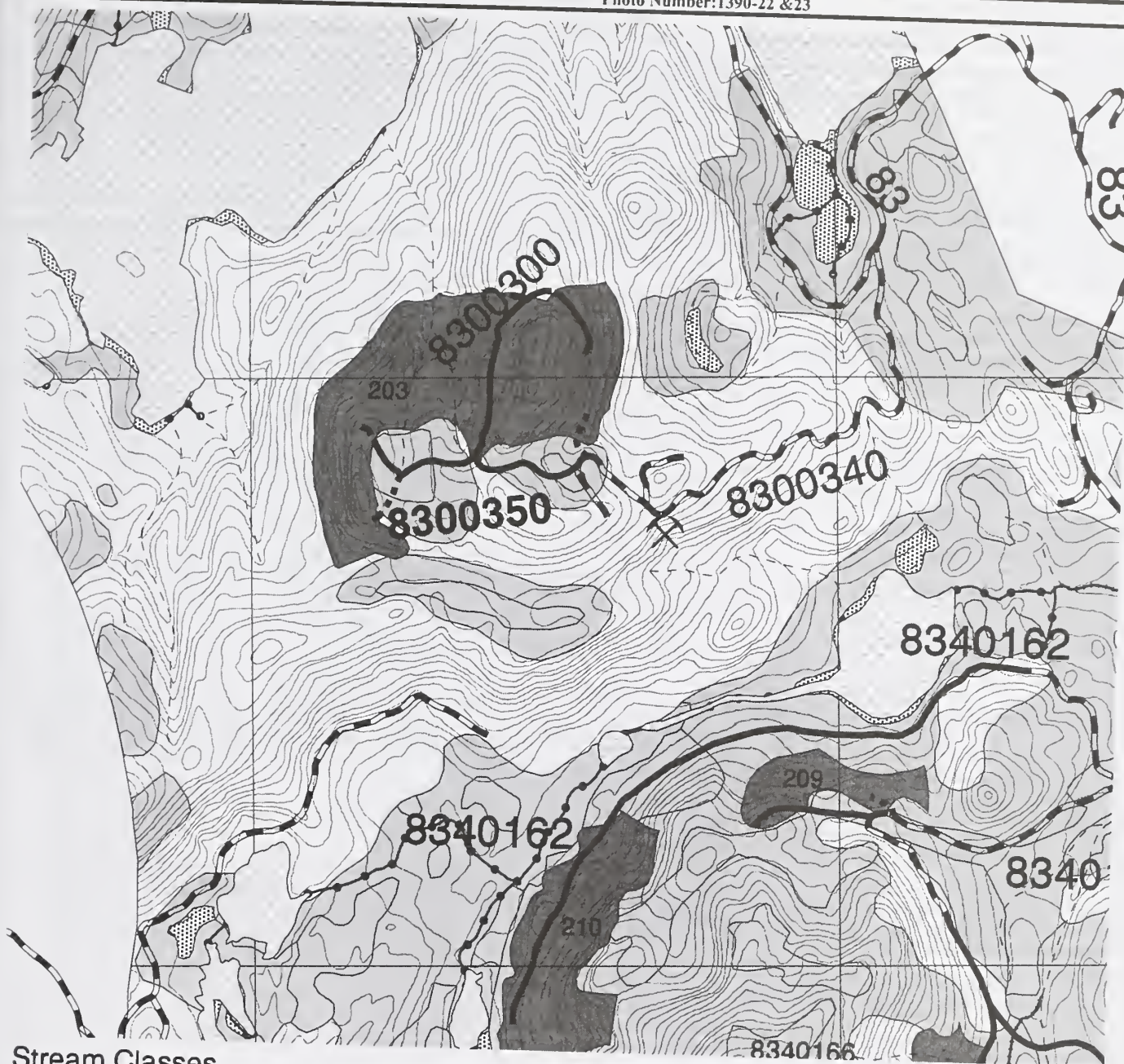
Scale: 1 inch = 1320 feet

Aerial Photo

Year: 91

Line:

Photo Number: 1390-22 & 23



Stream Classes

- Class 1 Streams
- Class 2 Streams
- Class 3 Streams

Roads

- Temp Spur
- Existing Road
- Proposed Road

Wetlands

- High Value Wetlands
- Other Wetlands
- 40' Contours
- Lakes
- Proposed Units
- Shoreline

4 inches = 1 mile



- Fish Passage Provided
- Fish Passage Failure
- Rock Pit
- Existing LTF

Road Data Card

Road Number: 8340000	ROD Road Number: 8340000	M.P.: 0.0	To M.P.: 12.40
Planned Length (miles): 12.40	Actual Length (miles):	New or Reconstruct:	reconstruction
Unit(s) Accessed: numerous	Road Locator:		

ROAD MANAGEMENT OBJECTIVES

Functional Class: Local	Traffic Service Level: D	Highway Safety Act Number: NO
Design Vehicle: LT	Critical Vehicle: low boy	Intended Purpose and Use: Silvicultural
Maintain Level: Active Sale 2 Post Sale 2	AFRPR STATUS: active	Closure Device:
Management Strategy (Encourage, Accept, Discourage, Eliminate or Prohibit): Accept	Erosion Control:	
Other Considerations: Mainline road Shelter Cove south to Gunsight Creek.		

CULTURAL RESOURCES as planned: No Cultural Concerns JTA 2/5/98
as located: No Cultural Concerns JTA 2/5/98

ENGINEERING/ROADS

Recon/Location Narrative/Design Considerations (major drainages, road grades, future access, etc.):

Planned vs Implemented (describe changes and rational):

Rock Source(s) Location and Special Mitigation: No special concerns. Pits located as shown on map.

FISH HABITAT

No fisheries concerns have been identified during the planning phase on this existing road. An inspection of all the existing culverts was completed in 1996 verifying all the stream-crossings located on this road were functioning properly. An inspection of all stream-crossings will be conducted again in the spring of 1998 to identify all the critical maintenance concerns. Stream crossings that require maintenance may be subject to timing restrictions for all in-stream maintenance. Due to the number of stream crossings present on this road, an annual inspection of all stream-crossing is recommended (BMP's 14.22, 14.2).

Stream Crossings As Planned (0 - Class I 0 - Class II 0 - Class III):

Stream Crossings As Located (Class I Class II Class III):

Cataloged Stream Crossings As Located:

GEOLOGY/KARST as planned: High landslide potential in the northern part of this road segment. See Soils/Watershed for mitigation measures.
as located:

LANDS/MINERALS as planned:

No concerns.

as located:

RECREATION/VISUALS as planned: Along portions of reconstructed road visible from Carroll Inlet: (1) Mitigate effects of sidecast and landing area slash, within 30 feet of road shoulders, by endhauling slash to a nonimpacting area, cover with soil and shape to natural contours. (2) Locate and design rockpits to minimize visual impacts from saltwater viewpoints by retaining screen trees, or angling cut opening away from view and minimizing back wall heights. (3) For future recreational use, fully rehabilitate rockpit areas including grading floor to drain, cleanup, and finished grading of overburden and waste rock, and seeding. WEA 2/23/98

as located:

SILVICULTURE as planned: No Concerns. CT 3/10/98

as located:

SOILS / WATERSHED as planned: The north part of this road segment crosses high landslide potential (MMI=3) areas (BMP 13.5). Avoid the placement of fill and side-casting of waste material on unstable side-slopes (BMP 14.7) during reconstruction. Erosion control seeding of cutbanks and fillslopes should be implemented as soon as possible (BMPs 12.17, 14..8) following reconstruction.

as located:

TIMBER/LOGGING SYSTEM/ADMINISTRATION as planned:No currently identified concerns AMG 3/11/98

as located:

WILDLIFE as planned: Road is within 0.5 miles of bald eagle nest. No blasting with in 0.5 miles of eagle nest 3/1 -5/31. If nest is active, no blasting within 0.5 miles of nest 6/1 - 8/31.

as located:

Ranger's Signature

Date

Road Data Card

Road Number: 8340000

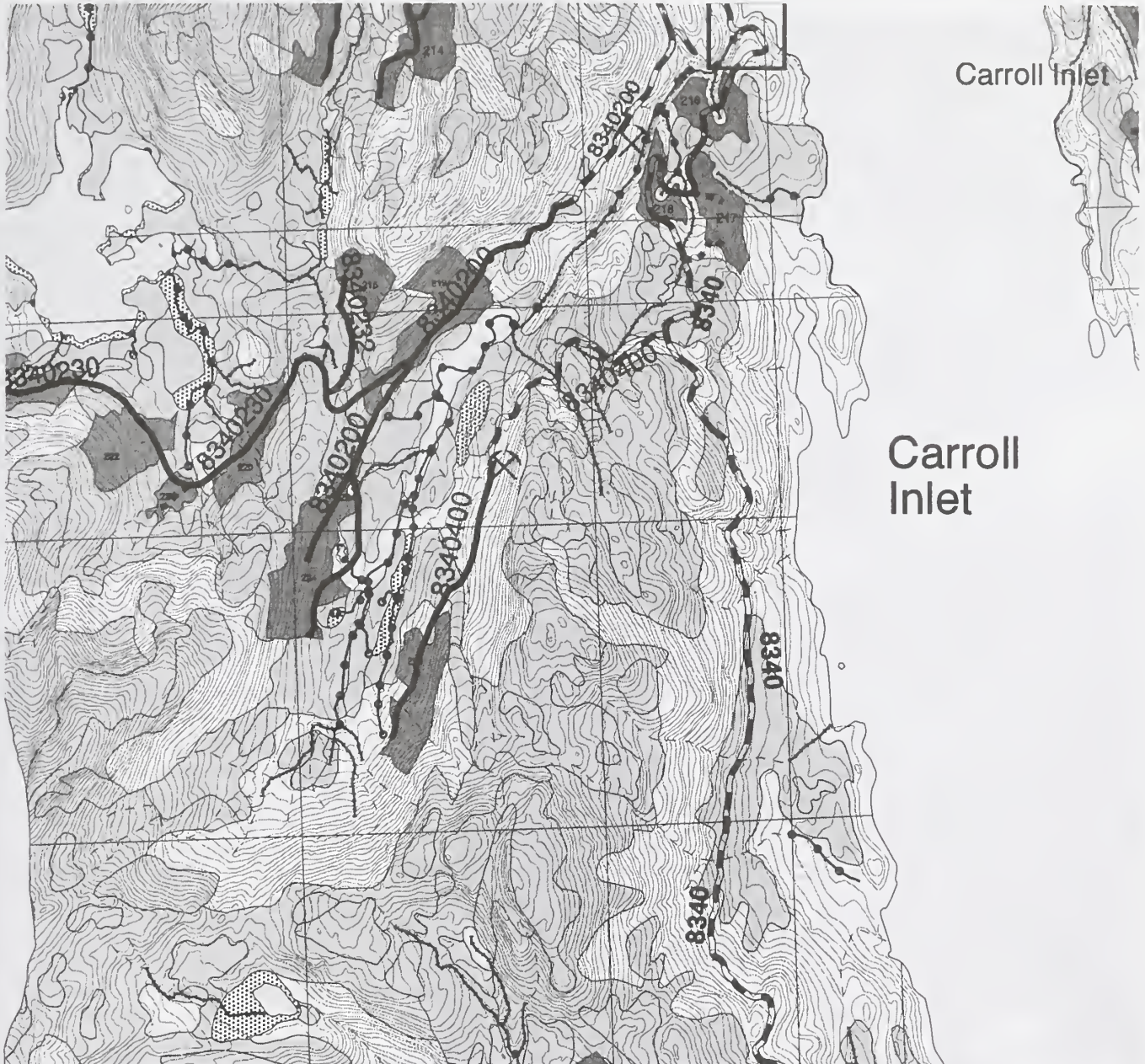
Map Number: KTN C-5 SE

Scale: 1 inch = 1320 feet

Aerial Photo Year:

Line:

Photo Number:



Stream Classes

- Class 1 Streams
- Class 2 Streams
- Class 3 Streams

Roads

- Temp Spur
- Existing Road
- Proposed Road

Wetlands

- High Value Wetlands
- Other Wetlands
- 40' Contours
- Lakes
- Proposed Units
- Shoreline

2 inches = 1 mile



- Fish Passage Provided
- Fish Passage Failure
- Rock Pit
- Existing LTF

Road Data Card

Road Number: 8340000

Aerial Photo

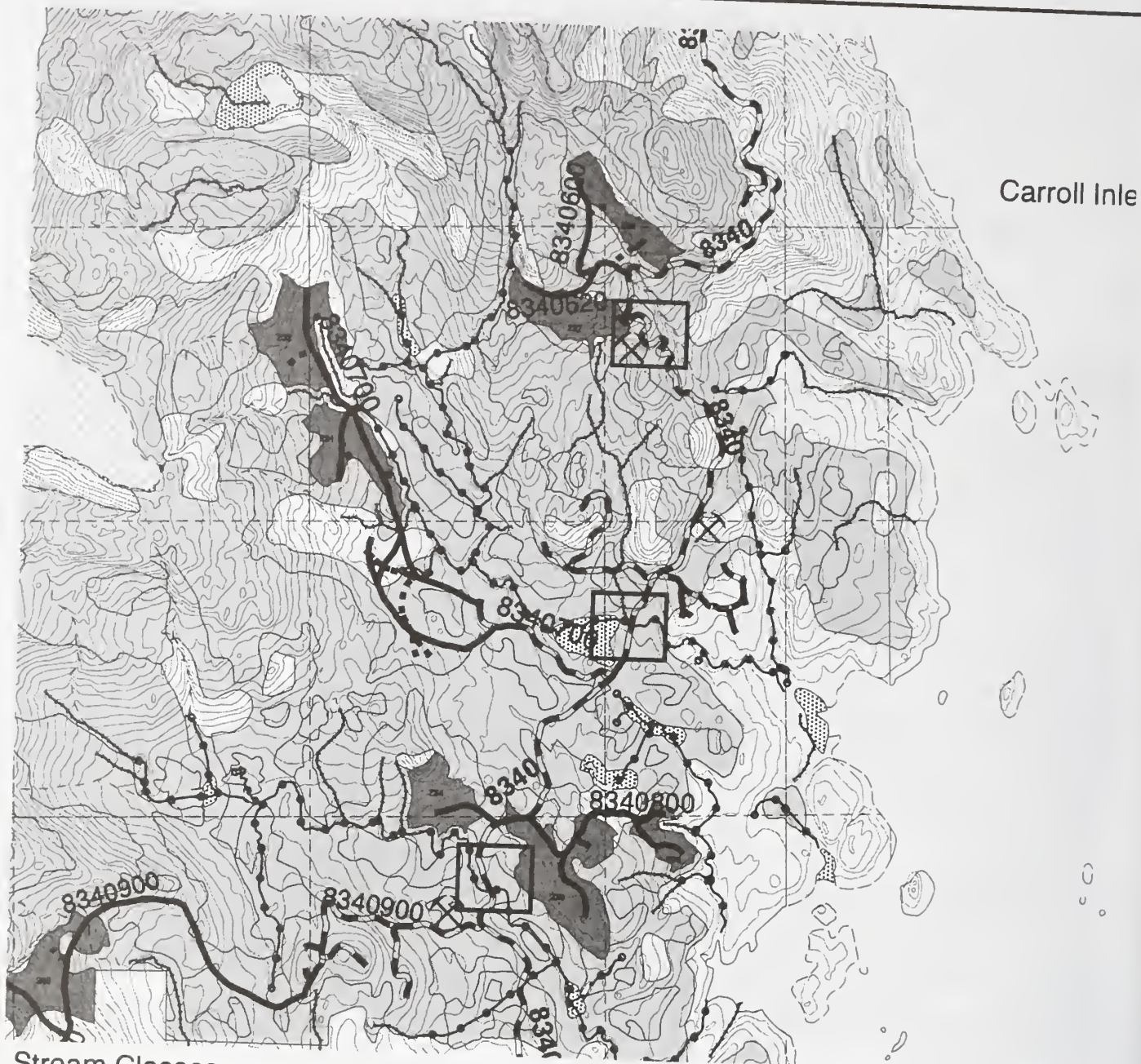
Year:

Map Number:

Line:

Photo Number:

Scale: 1 inch = 1320 feet



Stream Classes

- Class 1 Streams
- Class 2 Streams
- Class 3 Streams

Roads

- Temp Spur
- Existing Road
- Proposed Road

Wetlands

- High Value Wetlands
- Other Wetlands
- 40' Contours
- Lakes
- Proposed Units
- Shoreline

2 inches = 1 mile



- Fish Passage Provided
- Fish Passage Failure
- Rock Pit
- Existing LTF

Road Data Card

Road Number: 8340106

ROD Road Number: 8340106

M.P.: 0.0

To M.P.: 0.50

0.50 reconstruction

Actual Length (miles):

New or Reconstruct:

reconstruction

Unit(s) Accessed: numerous

Road Locator:

ROAD MANAGEMENT OBJECTIVES

Functional Class: Local

Traffic Service Level: D

Highway Safety Act Number: NO

Design Vehicle: LT

Critical Vehicle: LT

Intended Purpose and Use: Silvicultural

Maintain Level: Active Sale 2

Post Sale 1

AFRPR STATUS: Active

Closure Device:

Management Strategy (Encourage, Accept, Discourage, Eliminate or Prohibit): Prohibit

Erosion Control: water bar at MP 0.00

Other Considerations: Existing road and LTF at Shelter Cove

CULTURAL RESOURCES as planned: No Concerns JTA 2/5/98

as located: Avoid KET-015 at LTF JTA 2/5/98

ENGINEERING/ROADS

Recon/Location Narrative/Design Considerations (major drainages, road grades, future access, etc.):

Planned vs Implemented (describe changes and rational):

Rock Source(s) Location and Special Mitigation: No special concerns. Pits located as shown on map.

FISH HABITAT

No fisheries concerns were identified during the planning phase for this road.

Stream Crossings As Planned (0 - Class I 0 - Class II 0 - Class III):

Stream Crossings As Located (Class I Class II Class III):

Cataloged Stream Crossings As Located:

GEOLOGY/KARST as planned: No concerns.

as located:

LANDS/MINERALS as planned: No concerns.

as located:

RECREATION/VISUALS as planned: No concerns.

as located:

SILVICULTURE as planned: No concerns

as located:

SOILS / WATERSHED as planned: This road location minimizes the amount of construction on low value forested wetlands and avoids the medium value short sedge meadow to the east (BMPs 12.5 and 14.2). Use overlay road construction on wetlands and minimize side ditching, where practicable, to minimize the effects upon groundwater flow (BMP 14.3). Provide cross drains where needed to provide for the passage of surface water and aquatic organisms (BMP 12.5). Erosion control seeding of cutbanks and fillslopes should be implemented as soon as possible (BMPs 12.17, 14.8) following construction.

as located:

TIMBER/LOGGING SYSTEM/ADMINISTRATION as planned: No currently identified concerns AMG 3/11/98

as located:

WILDLIFE as planned: No mitigation measures anticipated.

as located:

Ranger's Signature

Date

Road Data Card

Road Number: 8340106

Map Number: KTN C-5 SE

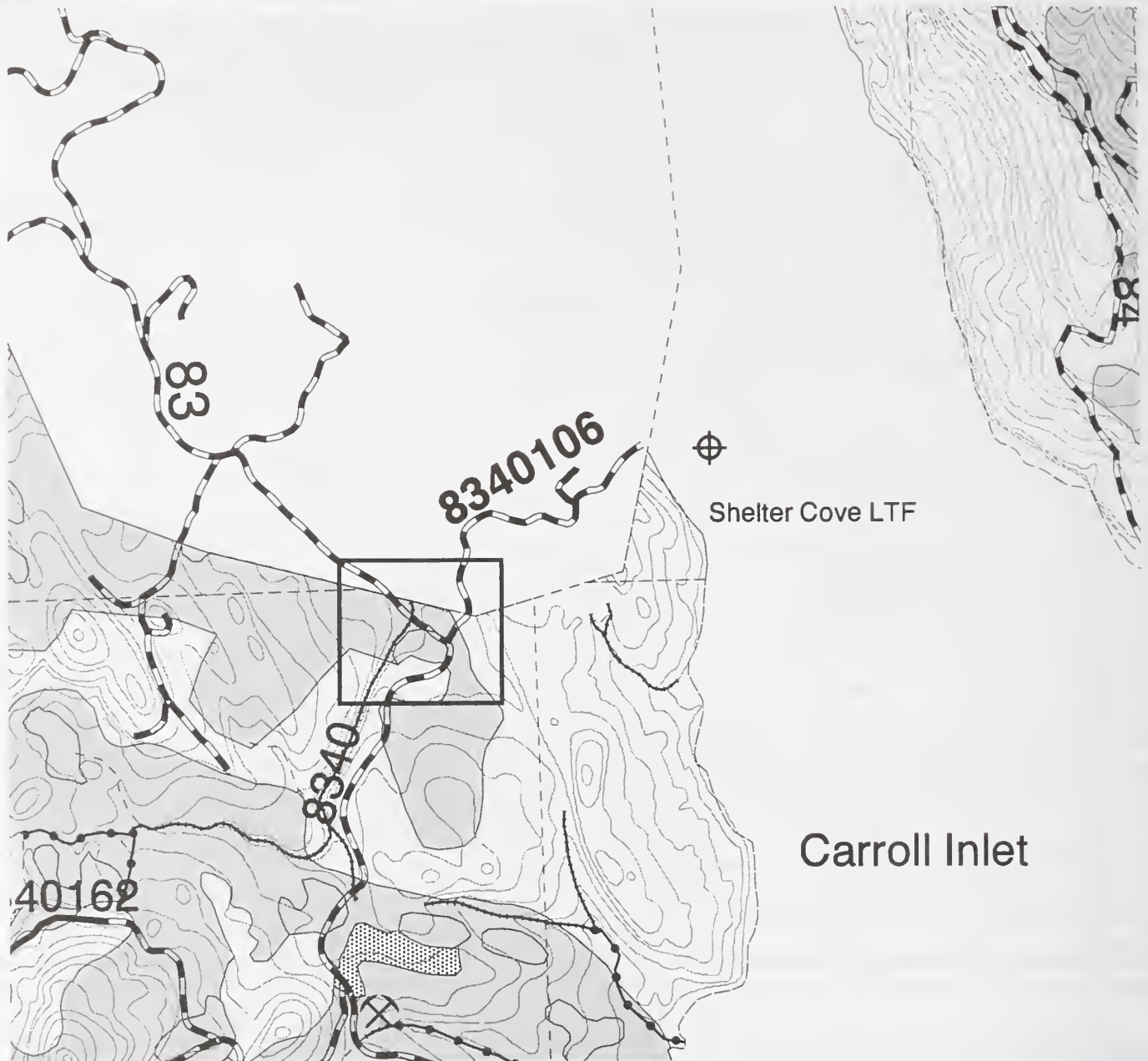
Scale: 1 inch = 1320 feet

Aerial Photo

Year: 91

Line:

Photo Number: 1390-22 & 23



Shelter Cove LTF

Carroll Inlet

Stream Classes

- Class 1 Streams
- Class 2 Streams
- Class 3 Streams

Roads

- Temp Spur
- Existing Road
- Proposed Road

Wetlands

- High Value Wetlands
- Other Wetlands
- 40' Contours
- Lakes
- Proposed Units
- Shoreline

4 inches = 1 mile



- Fish Passage Provided
- Fish Passage Failure
- Rock Pit
- Existing LTF

Road Data Card

Road Number: 8340160	ROD Road Number: 8340160	M.P.: 0.0	To M.P.: 0.9
Planned Length (miles): 0.9	Actual Length (miles):	New or Reconstruct:	construction
Unit(s) Accessed: 209,213,214	Road Locator:		

ROAD MANAGEMENT OBJECTIVES

Functional Class: L	Traffic Service Level: D	Highway Safety Act Number:
Design Vehicle: LT	Critical Vehicle: LT	Intended Purpose and Use: Silvicultural
Maintain Level: Active Sale 2	Post Sale 1	AFRPR STATUS: inactive
Management Strategy (Encourage, Accept, Discourage, Eliminate or Prohibit): Prohibit		Closure Device: Barrier
Other Considerations:		Erosion Control: water bar

CULTURAL RESOURCES as planned: No Cultural Concerns JTA 2/5/98
as located: No Cultural Concerns JTA 2/5/98

ENGINEERING/ROADS

Recon/Location Narrative/Design Considerations (major drainages, road grades, future access, etc.): No significant areas with sideslopes over 67% were crossed with the road location.

Planned vs Implemented (describe changes and rational):

Rock Source(s) Location and Special Mitigation: No special concerns. Pits located as shown on map.

FISH HABITAT

No fisheries concerns were identified during the planning phase.

Stream Crossings As Planned (0 - Class I 0 - Class II 0 - Class III):

Stream Crossings As Located (Class I Class II Class III):

Cataloged Stream Crossings As Located:

GEOLOGY/KARST as planned:

No concerns.

as located:

LANDS/MINERALS as planned:

No concerns.

as located:

RECREATION/VISUALS as planned:

No concerns.

as located:

SILVICULTURE as planned:

No Concerns. CT 3/10/98

as located:

SOILS / WATERSHED as planned:

The 8340160 road is located on low value forested wetlands and scrub-shrub muskeg (BMPs 12.5 and 14.2). Use overlay road construction on wetlands and minimize side ditching, where practicable, to minimize the effects upon groundwater flow (BMP 14.3). Provide cross drains where needed to provide for the passage of surface water and aquatic organisms (BMP 12.5). Erosion control seeding of cutbanks and fillslopes should be implemented as soon as possible (BMPs 12.17, 14.8) following construction..

as located:

TIMBER/LOGGING SYSTEM/ADMINISTRATION as planned:

No currently identified concerns AMG 3/11/98

as located:

WILDLIFE as planned:

No mitigation measures anticipated.

as located:

Ranger's Signature

Date

Road Data Card

Road Number: 8340160

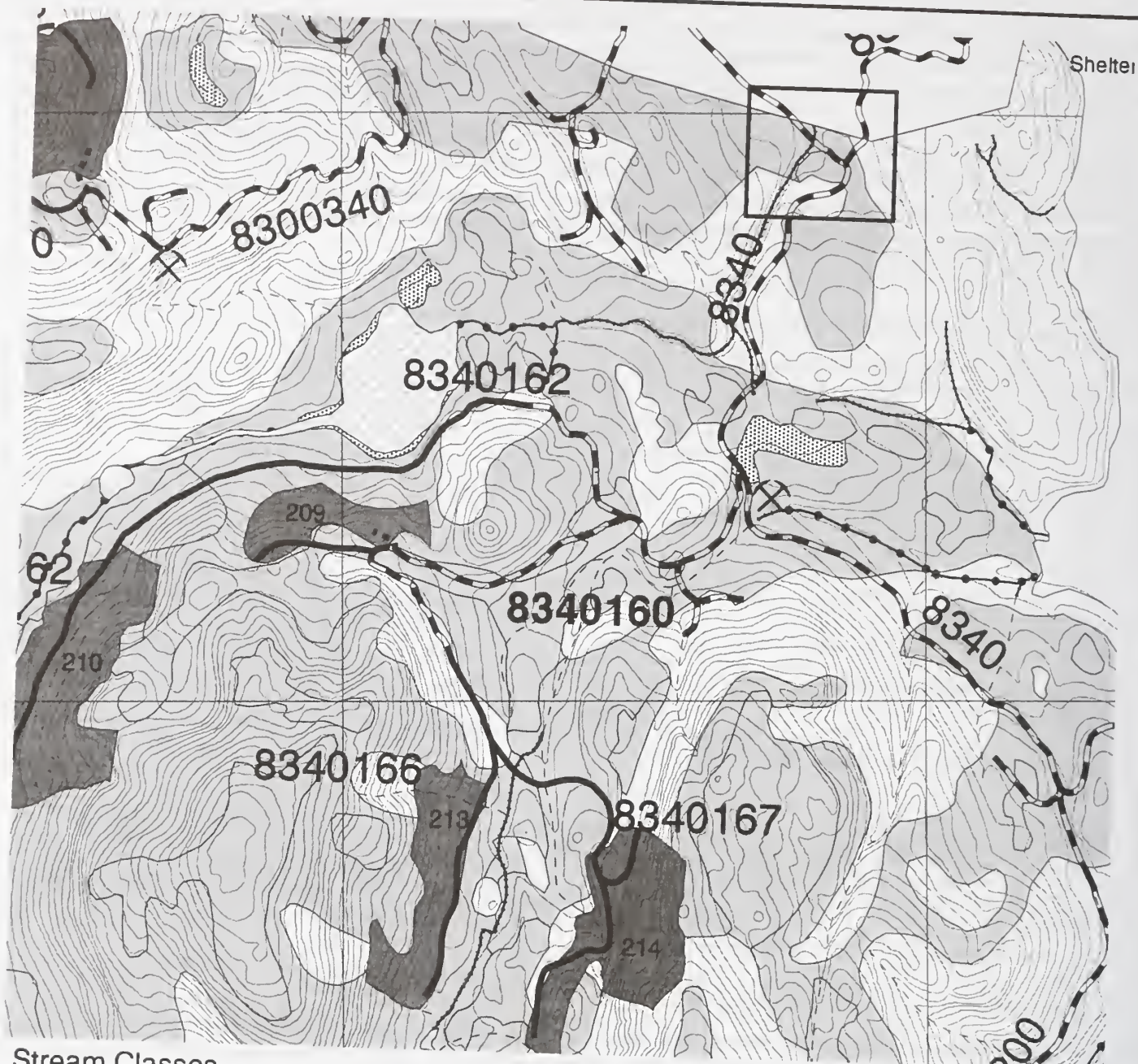
Aerial Photo Year: 91

Line:

Map Number: KTN C-5 SE

Photo Number: 1390-22

Scale: 1 inch = 1320 feet



- Stream Classes**
- Class 1 Streams
 - Class 2 Streams
 - Class 3 Streams

Roads

- Temp Spur
- Existing Road
- Proposed Road

Wetlands

- High Value Wetlands
- Other Wetlands
- 40' Contours
- Lakes
- Proposed Units
- Shoreline

4 inches = 1 mile



- Fish Passage Provided
- Fish Passage Failure
- Rock Pit
- Existing LTF

Road Data Card

Road Number: 8340162	ROD Road Number:	M.P.: 0.0	To M.P.: 1.6
Planned Length (miles):	Actual Length (miles):	New or Reconstruct:	construction
Unit(s) Accessed: 210	Road Locator:		

ROAD MANAGEMENT OBJECTIVES

Functional Class: L	Traffic Service Level: D	Highway Safety Act Number: N/A
Design Vehicle: LT	Critical Vehicle: LT	Intended Purpose and Use: Silvicultural
Maintain Level: Active Sale 2	Post Sale 1	AFRPR STATUS: closed
Management Strategy (Encourage, Accept, Discourage, Eliminate or Prohibit): Eliminate		Closure Device: Barrier
Other Considerations: Close road (Obliterate)		Erosion Control:

CULTURAL RESOURCES as planned: No Concerns JTA 2/5/98
as located: No Concerns JTA 2/5/98

ENGINEERING/ROADS

Recon/Location Narrative/Design Considerations (major drainages, road grades, future access, etc.): during final road location investigate moving road to top of ridge south of planned location, utilize an extension of 160 road. No significant areas with sideslopes over 67% were crossed with the road location.

Planned vs Implemented (describe changes and rational):

Rock Source(s) Location and Special Mitigation: No special concerns. Pits located as shown on map.

FISH HABITAT

Due to the close proximity of this road to a Class I lake, recommend relocating this road away from the lake riparian zone. District Biologist will assist the area engineer in the final location of this road (BMP 14.2). Passage may be required on some Class II streams after final the road location is reviewed by District Biologist (BMP 14.17)).

Stream Crossings As Planned (0 - Class I 0 - Class II 0 - Class III):

Stream Crossings As Located (Class I Class II Class III):

Cataloged Stream Crossings As Located:

GEOLOGY/KARST as planned: No concerns.
as located:

LANDS/MINERALS as planned: No concerns.
as located:

RECREATION/VISUALS as planned: No concerns.
as located:

SILVICULTURE as planned: No Concerns. CT 3/10/98
as located:

SOILS / WATERSHED as planned:

The entire road segment is located on areas of low value subalpine forested wetland and scrub-shrub muskeg (BMP 12.5). Use overlay road construction on wetlands and minimize side ditching, where practicable, to minimize the effects upon groundwater flow (BMP 14.3). Provide cross drains where needed to provide for the passage of surface water and aquatic organisms (BMP 12.5). Erosion control seeding of cutbanks and fillslopes should be implemented as soon as possible (BMPs 12.17, 14.8) following construction.

as located:

TIMBER/LOGGING SYSTEM/ADMINISTRATION as planned:No currently identified concerns AMG 3/11/98

as located:

WILDLIFE as planned: No mitigation measures anticipated.

as located:

Ranger's Signature

Date

Road Data Card

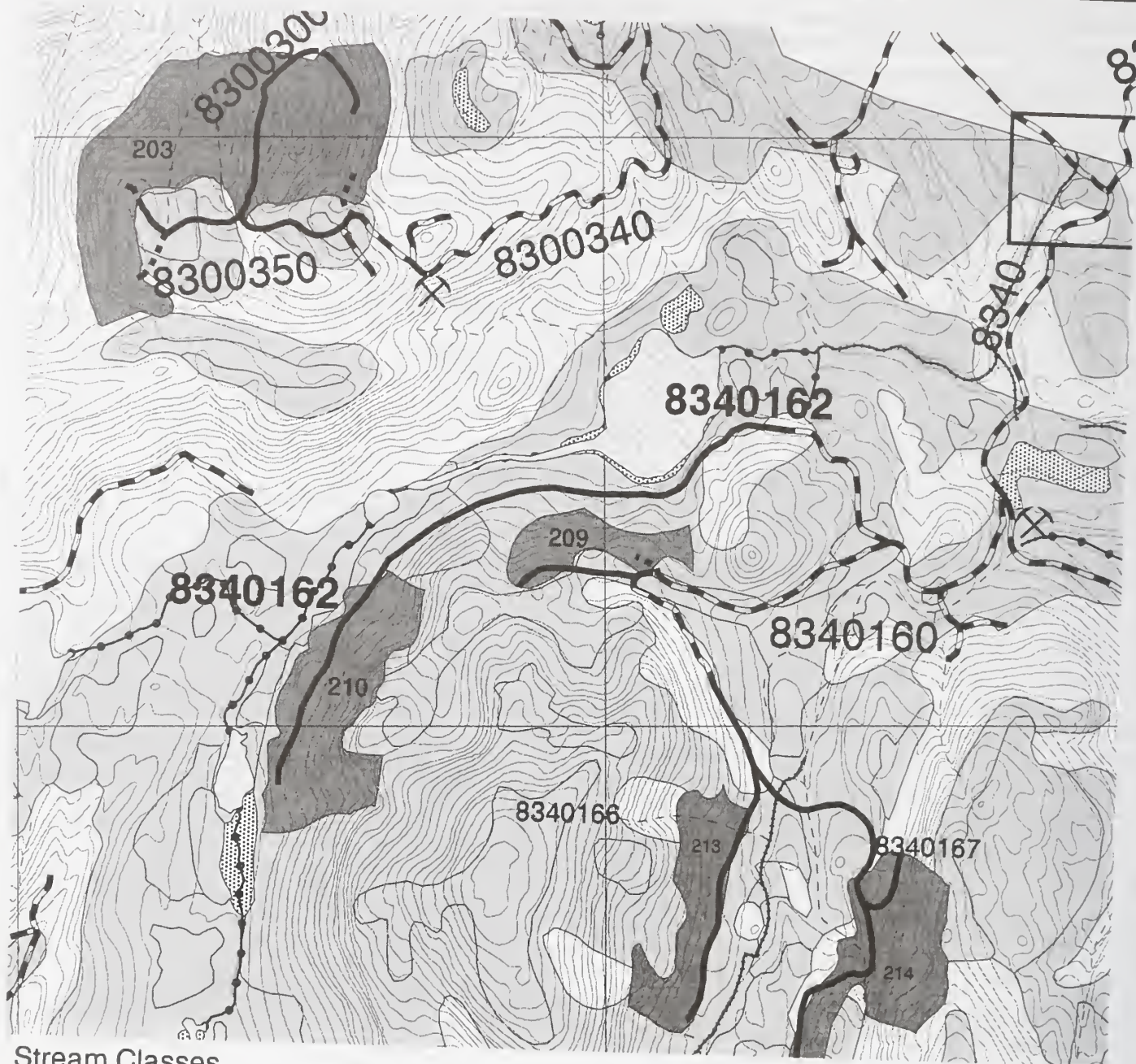
Road Number: 8340162
Aerial Photo Year: 91

Line:

Map Number:

Photo Number: 1390-

Scale: 1 inch = 1320 feet



Stream Classes

- Class 1 Streams
- Class 2 Streams
- Class 3 Streams

Roads

- Temp Spur
- Existing Road
- Proposed Road

Wetlands

- High Value Wetlands
- Other Wetlands
- 40' Contours
- Lakes
- Proposed Units
- Shoreline

4 inches = 1 mile



- Fish Passage Provided
- Fish Passage Failure
- Rock Pit
- Existing LTF

Road Data Card

Road Number: 8340166	ROD Road Number:	M.P.: 0.0	To M.P.: 0.7
Planned Length (miles): 0.70	Actual Length (miles):	New or Reconstruct:	construction
Unit(s) Accessed: 213, 214	Road Locator:		

ROAD MANAGEMENT OBJECTIVES

Functional Class: L	Traffic Service Level: D	Highway Safety Act Number: NO
Design Vehicle: LT	Critical Vehicle: LT	Intended Purpose and Use: Silvicultural
Maintain Level: Active Sale 2	Post Sale 1	AFRPR STATUS: closed
Management Strategy (Encourage, Accept, Discourage, Eliminate or Prohibit): Eliminate		Closure Device: Barrier
Other Considerations: Close road (Obliterate)		Erosion Control: water bar

CULTURAL RESOURCES as planned: No Cultural Concerns JTA 2/5/98
as located: No Cultural Concerns JTA 2/5/98

ENGINEERING/ROADS

Recon/Location Narrative/Design Considerations (major drainages, road grades, future access, etc.): Road location generally stays at the base of any significant steep sections >67%, there are some areas where road will cross short sections of steep ground in the first 1/4 mile of new construction.

Planned vs Implemented (describe changes and rationale):

Rock Source(s) Location and Special Mitigation: No special concerns. Pits located as shown on map.

FISH HABITAT

No fisheries concerns identified.

Stream Crossings As Planned (0 - Class I 0 - Class II 1- Class III):

Stream Crossings As Located (Class I Class II Class III):

Cataloged Stream Crossings As Located:

GEOLOGY/KARST as planned:

High landslide potential. See Soils/Watershed for mitigation measures.

as located:

LANDS/MINERALS as planned:

No concerns.

as located:

RECREATION/VISUALS as planned:

No concerns.

as located:

SILVICULTURE as planned: No Concerns. CT 3/10/98

as located:

SOILS / WATERSHED as planned:

This road segment is located on areas of high landslide potential (MMI=3) soils (BMP 13.5). Much of this road segment is also located on forested wetlands (BMP 12.5). Roads on these steep, potentially unstable slopes may require full-bench design (BMP 14.7). Minimize the amount of fill slopes on these potentially unstable areas. Limit blasting for road construction when the soil is saturated (BMP 14.6). Use overlay road construction on wetlands and minimize side ditching, where practicable, to minimize the effects upon groundwater flow (BMP 14.3). Provide cross drains where needed to provide for the passage of surface water and aquatic organisms (BMP 12.5). Erosion control seeding of cutbanks and fillslopes should be implemented as soon as possible (BMPs 12.17, 14.8) following construction.

as located:

TIMBER/LOGGING SYSTEM/ADMINISTRATION as planned: No currently identified concerns AMG 3/11/98

as located:

WILDLIFE as planned: No mitigation anticipated.

as located:

Ranger's Signature

Date

Road Data Card

Road Number: 8340166

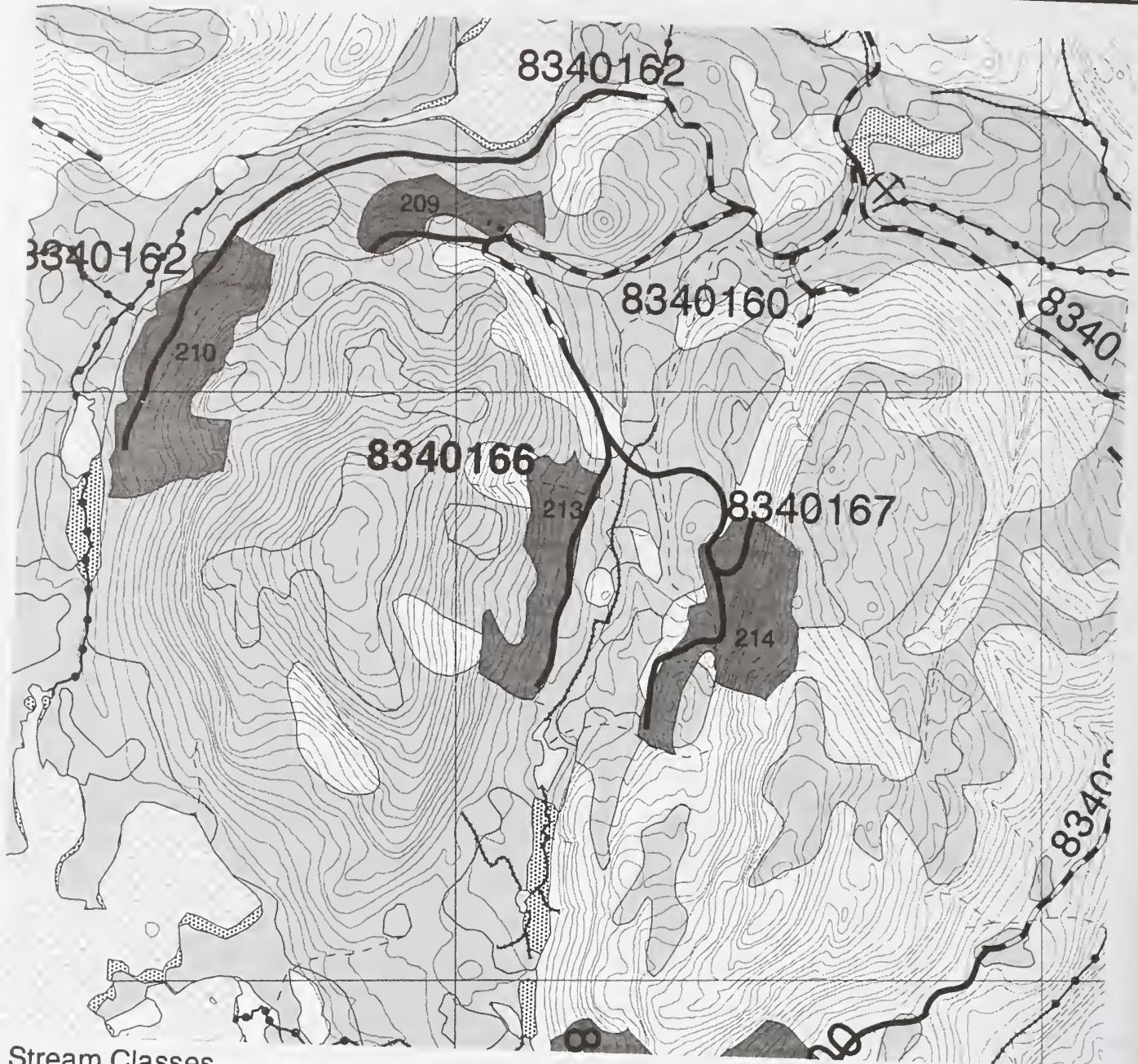
Aerial Photo Year: 91

Line:

Map Number: KTN C-5 SE

Photo Number: 1390-22

Scale: 1 inch = 1320 feet



Stream Classes

- Class 1 Streams
- Class 2 Streams
- Class 3 Streams

Roads

- Temp Spur
- Existing Road
- Proposed Road

Wetlands

- High Value Wetlands
- Other Wetlands
- 40' Contours
- Lakes
- Proposed Units
- Shoreline

4 inches = 1 mile



- Fish Passage Provided
- Fish Passage Failure
- Rock Pit
- Existing LTF

8340166 ■ Road Number

Road Data Card

Road Number: 8340167	ROD Road Number:	M.P.: 0.0	To M.P.: 0.2
Planned Length (miles): 0.2	Actual Length (miles):	New or Reconstruct:	construction
Unit(s) Accessed: 214	Road Locator:		

ROAD MANAGEMENT OBJECTIVES

Functional Class: L	Traffic Service Level: D	Highway Safety Act Number: NO
Design Vehicle: LT	Critical Vehicle: LT	Intended Purpose and Use: Silvicultural
Maintain Level: Active Sale 2	Post Sale 1	AFRPR STATUS: closed
Management Strategy (Encourage, Accept, Discourage, Eliminate or Prohibit): Eliminate		Closure Device: barrier
Other Considerations: Close road (Obliterate)		Erosion Control: waterbar

CULTURAL RESOURCES as planned: No Cultural Concerns JTA 2/5/98
as located: No Cultural Concerns JTA 2/5/98

ENGINEERING/ROADS

Recon/Location Narrative/Design Considerations (major drainages, road grades, future access, etc.):

Planned vs Implemented (describe changes and rational):

Rock Source(s) Location and Special Mitigation: No special concerns. Pits located as shown on map.

FISH HABITAT

Passage is required on the Class II streamcrossings located on this road. Recommend short-term log stringer bridge to minimize sedimentation and ensure fish passage (BMP 14.17).

Stream Crossings As Planned (0 - Class I 1- Class II 1 - Class III):

Stream Crossings As Located (Class I Class II Class III):

Cataloged Stream Crossings As Located:

GEOLOGY/KARST as planned: High landslide potential. See Soils/Watershed for mitigation measures.
as located:

LANDS/MINERALS as planned: No concerns.
as located:

RECREATION/VISUALS as planned: No concerns.
as located:

SILVICULTURE as planned: No Concerns. CT 3/10/98
as located:

SOILS / WATERSHED as planned:

Much of this road segment is located on areas of high landslide potential (MMI=3) soils (BMP 13.5). The 8340167 road also crosses some forested wetlands and scrub-shrub muskeg wetlands (BMP 12.5). This road segment has been planned to avoid wetland areas (BMP 14.2) to the extent practicable. Roads on steep, potentially unstable slopes may require full-bench design (BMP 14.7). Avoid placing fill on wetlands and steep, potentially unstable slopes (BMPs 14.7 and 14.19). Limit blasting for road construction and rock pit development when the soil is saturated (BMP 14.6). Use overlay road construction on wetlands and minimize side ditching, where practicable, to minimize the effects upon groundwater flow (BMP 14.3). Provide cross drains where needed to provide for the passage of surface water and aquatic organisms (BMP 12.5). Erosion control seeding of cutbanks and fillslopes should be implemented as soon as possible (BMPs 12.17, 14.8) following construction.

as located:

TIMBER/LOGGING SYSTEM/ADMINISTRATION as planned:No currently identified concerns AMG 3/11/98
as located:

WILDLIFE as planned: No mitigation measures anticipated.
as located:

Ranger's Signature

Date

Road Data Card

Road Number: 8340167

Aerial Photo

Year: 91

Line:

Map Number: KTN C-5 SE

Photo Number: 1390-

Scale: 1 inch = 1320 feet



Stream Classes

- Class 1 Streams
- Class 2 Streams
- Class 3 Streams

Roads

- Temp Spur
- Existing Road
- Proposed Road

Wetlands

- High Value Wetlands
- Other Wetlands
- 40' Contours
- Lakes
- Proposed Units
- Shoreline

4 inches = 1 mile



- Fish Passage Provided
- Fish Passage Failure
- Rock Pit
- Existing LTF

8340167 ■ Road Number

Road Data Card

Road Number: 8340200	ROD Road Number: 8340200	M.P.: 0.0	To M.P.: 2.3
Planned Length (miles): 1.0 reconst 1.3 new construction	Actual Length (miles):	New or Reconstruct: reconst and new construction	
Unit(s) Accessed: 219,220,222,223,215,224	Road Locator:		

ROAD MANAGEMENT OBJECTIVES

Functional Class: Local	Traffic Service Level: D	Highway Safety Act Number: NO
Design Vehicle: LT	Critical Vehicle: LT	Intended Purpose and Use: Silvicultural
Maintain Level: Active Sale 2 Post Sale 1	AFRPR STATUS: inactive	Closure Device: Barrier
Management Strategy (Encourage, Accept, Discourage, Eliminate or Prohibit): Eliminate	Erosion Control: water bar	
Other Considerations:		

CULTURAL RESOURCES as planned: No Cultural Concerns JTA 2/5/98
as located: No Cultural Concerns JTA 2/5/98

ENGINEERING/ROADS

Recon/Location Narrative/Design Considerations (major drainages, road grades, future access, etc.): No significant areas of steep slopes, >67%, were crossed on this location.

Planned vs Implemented (describe changes and rationale):

Rock Source(s) Location and Special Mitigation: No special concerns. Pits located as shown on map.

FISH HABITAT

Existing Road- No fisheries concerns have been identified during the planning phase on this existing road. Culvert inspections completed in 1996 verified that all culverts were functioning properly. An inspection of this road is scheduled for the spring of 1998 to identify any critical maintenance required for this road. (BMP 14.22).

Proposed Road- Passage and timing is required on all Class I and II stream crossings due to the close proximity of anadromous fish. All instream road construction will be permitted between June 15 -August 7th (BMP's 14.17 and 14.6). Recommend developing a erosion control plan for all streamcrossings that require timing restrictions to minimize sedimentation to downstream fish habitat. In addition, timing restrictions may be required for some Class III streams after final road location is reviewed by District Biologist (BMP 14.5).

Stream Crossings As Planned (1 - Class I 1 - Class II 0 -Class III):

Stream Crossings As Located (Class I - Class II - Class III):

Cataloged Stream Crossings As Located:

GEOLOGY/KARST as planned: No concerns.
as located:

LANDS/MINERALS as planned: No concerns.
as located:

RECREATION/VISUALS as planned: No concerns.
as located:

SILVICULTURE as planned: No Concerns. CT 3/10/98
as located:

SOILS / WATERSHED as planned:

This road segment crosses areas of low value forested wetlands and scrub-shrub muskeg (BMP 12.5). Use overlay road construction on wetlands and minimize side ditching, when practicable, to minimize the effects upon groundwater flow (BMP 14.3). Erosion control seeding of cutbanks and fillslopes should be implemented as soon as possible (BMPs 12.17, 14.8) following construction and reconstruction.

as located:

TIMBER/LOGGING SYSTEM/ADMINISTRATION as planned:No currently identified concerns AMG 3/11/98
as located:

WILDLIFE as planned: No mitigation measures anticipated.
as located:

Ranger's Signature

Date

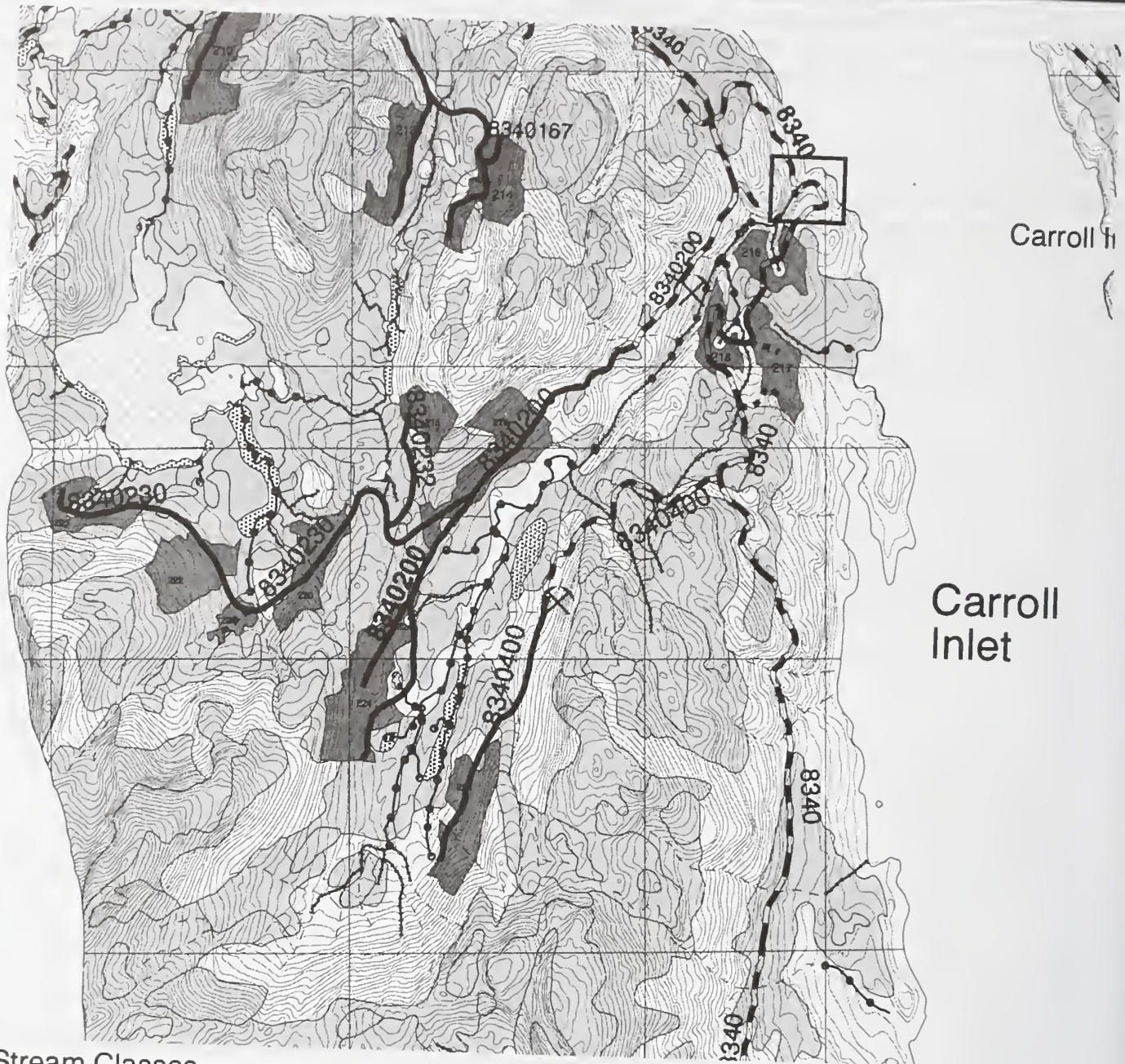
Road Number: 8340200				Aerial Photo				Year: 91				Line:				Map Number: KTN B-5 NE				Photo Number: 1390				Scale: 1 inch = 1320 feet			
----------------------	--	--	--	--------------	--	--	--	----------	--	--	--	-------	--	--	--	------------------------	--	--	--	--------------------	--	--	--	---------------------------	--	--	--

Aerial Photo Year: 91


Map Number: KTN B-5 NE

Photo Number: 1390

Scale: 1 inch = 1320 feet









Stream Classes

- 
- Class 1 Streams
Class 2 Streams
Class 3 Streams

Roads


-
- Temp Spur
Existing Road
Proposed Road

Wetlands

-
-  High Value Wetlands
 Other Wetlands
 40' Contours
 Lakes
 Proposed Units
 Shoreline

2 inches = 1 mile



- 
 Fish Passage Provided
 Fish Passage Failure
 Rock Pit
 Existing LTF

8340200 ■ Road Number

Road Data Card

Road Number: 8340230	ROD Road Number: 8340230	M.P.: 0.0	To M.P.: 1.50
Planned Length (miles): 1.50 new construction	Actual Length (miles):	New or Reconstruct:	new construction
Unit(s) Accessed: 220,222,223	Road Locator:		

ROAD MANAGEMENT OBJECTIVES

Functional Class: Local	Traffic Service Level: D	Highway Safety Act Number: NO
Design Vehicle: LT	Critical Vehicle: LT	Intended Purpose and Use: Silvicultural
Maintain Level: Active Sale 2 Post Sale 1	AFRPR STATUS: inactive	Closure Device: Barrier
Management Strategy (Encourage, Accept, Discourage, Eliminate or Prohibit): Eliminate		Erosion Control: water bars
Other Considerations:		

CULTURAL RESOURCES as planned: No Cultural Concerns JTA 2/5/98
as located: No Cultural Concerns JTA 2/5/98

ENGINEERING/ROADS

Recon/Location Narrative/Design Considerations (major drainages, road grades, future access, etc.): No significant areas of steep slopes, >67%, were crossed on this location.

Planned vs Implemented (describe changes and rationale): During final location consider moving road above Class II section of streams.

Rock Source(s) Location and Special Mitigation: No special concerns. Pits located as shown on map.

FISH HABITAT

Passage is required on one Class II streamcrossings (BMP 14.17). Additional passage requirements may be required for some Class II streams after final road location is reviewed by the District Biologist. Recommend developing a erosion control plan to minimize sedimentation during installation of all structures (BMP 14.5).

Stream Crossings As Planned (0 -Class I 1 - Class II 5 - Class III): Class II streams will have oversize cmgs, bury bottom min. 2 ft. Class III streams have 2 cmgs ≥1200mm and 3 cmgs 1200mm diameter.

Stream Crossings As Located (Class I Class II Class III):

Cataloged Stream Crossings As Located:

GEOLOGY/KARST as planned: No concerns.

as located:

LANDS/MINERALS as planned: No concerns.

as located:

RECREATION/VISUALS as planned: No concerns.

as located:

SILVICULTURE as planned: No Concerns. CT 3/10/98

as located:

SOILS / WATERSHED as planned:

Sections of the 8340230 road will require construction across a low value shrub-scrub muskeg and forested wetland (BMPs 12.5, 14.2). Use overlay road construction on wetlands and minimize side ditching, where practicable, to minimize the effects upon groundwater flow (BMP 14.3). Provide cross drains where needed to provide for the passage of surface water and aquatic organisms (BMP 12.5). Erosion control seeding of cutbanks and fillslopes should be implemented as soon as possible (BMPs 12.17, 14.8) following construction.

as located:

TIMBER/LOGGING SYSTEM/ADMINISTRATION as planned:No currently identified concerns AMG 3/11/98

as located:

WILDLIFE as planned: No mitigation measures anticipated.

as located:

Ranger's Signature

Date

Road Data Card

Road Number: 8340230

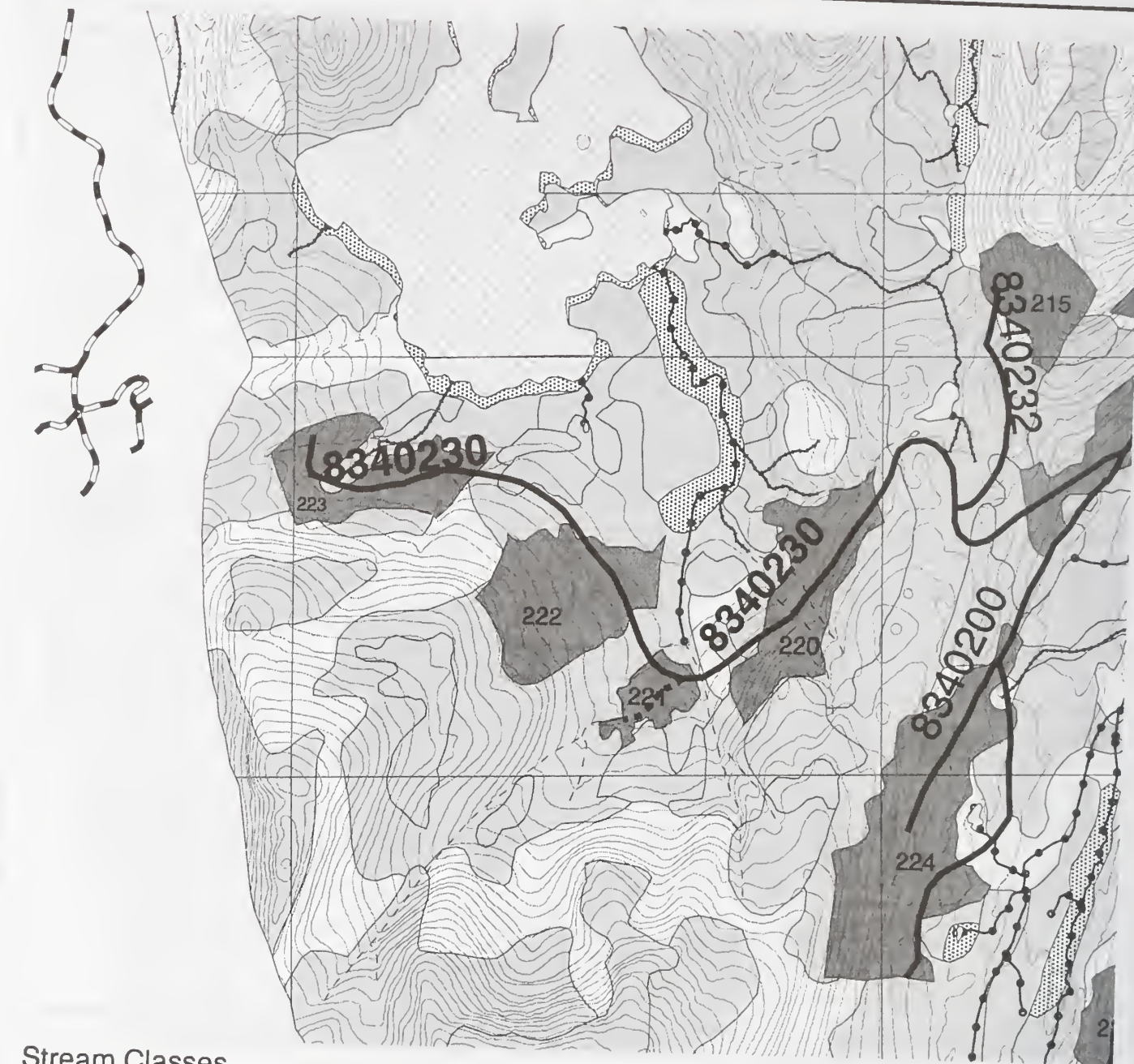
Aerial Photo Year: 91

Line:

Map Number: KTN B-5 NE

Photo Number: 1390

Scale: 1 inch = 1320 feet



Stream Classes

- Class 1 Streams
- Class 2 Streams
- Class 3 Streams

Roads

- Temp Spur
- Existing Road
- Proposed Road

Wetlands

- High Value Wetlands
- Other Wetlands
- 40' Contours
- Lakes
- Proposed Units
- Shoreline

4 inches = 1 mile



- Fish Passage Provided
- Fish Passage Failure
- Rock Pit
- Existing LTF

8340230 ■ Road Number

Sea Level Draft EIS

Road Data Card

Road Number: 8340232	ROD Road Number: 8340232	M.P.: 0.0	To M.P.: 0.50
Planned Length (miles): 0.50 new construction	Actual Length (miles):	New or Reconstruct:	new construction
Unit(s) Accessed: 215	Road Locator:		

ROAD MANAGEMENT OBJECTIVES

Functional Class: Local	Traffic Service Level: D	Highway Safety Act Number: NO
Design Vehicle: LT	Critical Vehicle: LT	Intended Purpose and Use: Silvicultural
Maintain Level: Active Sale 2 Post Sale 1	AFRPR STATUS: Closed	Closure Device: Barrier
Management Strategy (Encourage, Accept, Discourage, Eliminate or Prohibit): Eliminate		Erosion Control: water bar 0
Other Considerations:		

CULTURAL RESOURCES as planned: No Cultural Concerns JTA 2/5/98
as located: No Cultural Concerns JTA 2/5/98

ENGINEERING/ROADS

Recon/Location Narrative/Design Considerations (major drainages, road grades, future access, etc.): No significant areas of steep slopes, >67%, were crossed on this location.

Planned vs Implemented (describe changes and rational):

Rock Source(s) Location and Special Mitigation: No special concerns. Pits located as shown on map.

FISH HABITAT

No fisheries concerns have been identified during the planning phase.

Stream Crossings As Planned (0 - Class I 0 - Class II 0 - Class III):

Stream Crossings As Located (Class I Class II Class III):

Cataloged Stream Crossings As Located:

GEOLOGY/KARST as planned: No concerns.

as located:

LANDS/MINERALS as planned: No concerns.

as located:

RECREATION/VISUALS as planned: No concerns.

as located:

SILVICULTURE as planned: No Concerns. CT 3/10/98

as located:

SOILS / WATERSHED as planned:

A short section (about 700 feet) of the 8340232 will require construction across a low value forested wetland (BMPs 12.5, 14.2). Use overlay road construction on wetlands and minimize side ditching, where practicable, to minimize the effects upon groundwater flow (BMP 14.3). Provide cross drains where needed to provide for the passage of surface water and aquatic organisms (BMP 12.5). Erosion control seeding of cutbanks and fillslopes should be implemented as soon as possible (BMPs 12.17, 14.8) following construction. No areas in excess of 67% sideslopes or unstable soils.

as located:

TIMBER/LOGGING SYSTEM/ADMINISTRATION as planned:No currently identified concerns AMG 3/11/98

as located:

WILDLIFE as planned: No mitigation measures anticipated.

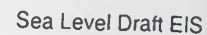
as located:

Ranger's Signature

Date

Scale: 1 inch = 1320 feet

Scale: 1 inch = 1320 feet



Road Data Card

Road Number: 8340400 ROD Road Number: 8340400 M.P.: 0.0 To M.P.: 2.00
Planned Length (miles): 1.0 reconst 1.0 new construction Actual Length (miles): New or Reconstruct: reconst and new construction
Unit(s) Accessed: 226 Road Locator:

ROAD MANAGEMENT OBJECTIVES

Functional Class: Local Traffic Service Level: D Highway Safety Act Number: NO
Design Vehicle: LT Critical Vehicle: LT Intended Purpose and Use: Silvicultural
Maintain Level: Active Sale 2 Post Sale 1 AFRPR STATUS: Inactive Closure Device: Barrier
Management Strategy (Encourage, Accept, Discourage, Eliminate or Prohibit): Eliminate Erosion Control: water bar
Other Considerations:

CULTURAL RESOURCES as planned: No Cultural Concerns JTA 2/5/98
as located: No Cultural Concerns JTA 2/5/98

ENGINEERING/ROADS

Recon/Location Narrative/Design Considerations (major drainages, road grades, future access, etc.): No significant areas of steep slopes, >67%, were crossed on this location.

Planned vs Implemented (describe changes and rational):

Rock Source(s) Location and Special Mitigation: No special concerns. Pits located as shown on map.

FISH HABITAT:

Existing Roads- No fisheries concerns have been identified during the planning phase on this existing road. An inspection of all the culverts will be conducted in the spring of 1998 to verify fish passage is provided on all Class II streams (BMP 14.22).

Proposed Roads- No fisheries concerns have been identified during the planning phase. Timing restrictions may be required on some Class III streams after final road location is reviewed by District Biologist. (BMP 14.6)

Stream Crossings As Planned (0 - Class I 0 - Class II 2- Class III):

Stream Crossings As Located (Class I Class II Class III):

Cataloged Stream Crossings As Located:

GEOLOGY/KARST as planned: No concerns.
as located:

LANDS/MINERALS as planned: No concerns.
as located:

RECREATION/VISUALS as planned: No concerns.
as located:

SILVICULTURE as planned: No Concerns. CT 3/10/98
as located:

SOILS / WATERSHED as planned:

A short section (about 700 feet) of the 8340400 will require construction across a low value shrub-scrub muskeg wetland (BMPs 12.5, 14.2). Use overlay road construction on wetlands and minimize side ditching, where practicable, to minimize the effects upon groundwater flow (BMP 14.3). Provide cross drains where needed to provide for the passage of surface water and aquatic organisms (BMP 12.5). Erosion control seeding of cutbanks and fillslopes should be implemented as soon as possible (BMPs 12.17, 14.8) following construction and reconstruction. No slopes in excess of 67% or unstable soils encountered.

as located:

TIMBER/LOGGING SYSTEM/ADMINISTRATION as planned: No currently identified concerns AMG 3/11/98
as located:

WILDLIFE as planned: No mitigation measures anticipated.
as located:

Ranger's Signature

Date

Road Data Card

Road Number: 8340400
Aerial Photo Year: 91

Map Number: KTN B5 NE
Line:
Photo Number: 1390-

Scale: 1 inch = 1320 feet



Stream Classes

- Class 1 Streams
- Class 2 Streams
- Class 3 Streams

Roads

- Temp Spur
- Existing Road
- Proposed Road

Wetlands

- High Value Wetlands
- Other Wetlands
- 40' Contours
- Lakes
- Proposed Units
- Shoreline

4 inches = 1 mile

- Fish Passage Provided
- Fish Passage Failure
- Rock Pit
- Existing LTF

Road Data Card

Road Number: 8340600	ROD Road Number: 8340600	M.P.: 0.0	To M.P.: 0.50
Planned Length (miles): 0.50	Actual Length (miles):	New or Reconstruct:	new const
Unit(s) Accessed: 227,228	Road Locator:		

ROAD MANAGEMENT OBJECTIVES

Functional Class: Local	Traffic Service Level: D	Highway Safety Act Number: NO
Design Vehicle: LT	Critical Vehicle: LT	Intended Purpose and Use: Silvicultural
Maintain Level: Active Sale 2 Post Sale 1	AFRPR STATUS: Closed	Closure Device: Barrier
Management Strategy (Encourage, Accept, Discourage, Eliminate or Prohibit): eliminate		Erosion Control: water bar
Other Considerations:		

CULTURAL RESOURCES as planned: No Cultural Concerns JTA 2/5/98

as located: No Cultural Concerns JTA 2/5/98

ENGINEERING/ROADS

Recon/Location Narrative/Design Considerations (major drainages, road grades, future access, etc.): No significant areas of steep slopes, >67%, were crossed on this location.

Planned vs Implemented (describe changes and rationale):

Rock Source(s) Location and Special Mitigation: No special concerns. Pits located as shown on map. Existing pit on 8340000

FISH HABITAT

No fisheries concerns have been identified during the planning phase. Additional mitigation may be necessary on some Class III streams after final road location is reviewed by District Biologist. Class III stream crossing is 1200mm diameter emp or larger.

Stream Crossings As Planned (0 - Class I 0 - Class II 1 - Class III):

Stream Crossings As Located (Class I Class II Class III):

Cataloged Stream Crossings As Located:

GEOLOGY/KARST as planned: No concerns.

as located:

LANDS/MINERALS as planned: No concerns.

as located:

RECREATION/VISUALS as planned: No concerns.

as located:

SILVICULTURE as planned: No Concerns. CT 3/10/98

as located:

SOILS / WATERSHED as planned:

The 8340600 road is located on an area of shrub-serub muskeg wetland (BMP 12.5 and 14.2). Use overlay road construction on wetlands and minimize side ditching, where practicable, to minimize the effects upon groundwater flow (BMP 14.3). Provide cross drains where needed to provide for the passage of surface water and aquatic organisms (BMP 12.5). Erosion control seeding of cutbanks and fillslopes should be implemented as soon as possible (BMPs 12.17, 14.8) following construction. No slopes in excess of 67% or unstable soils encountered; field verify during final location.

as located:

TIMBER/LOGGING SYSTEM/ADMINISTRATION as planned:No currently identified concerns AMG 3/11/98

as located:

WILDLIFE as planned: No mitigation measures anticipated.

as located:

Ranger's Signature

Date

Road Data Card

Road Number: 8340600

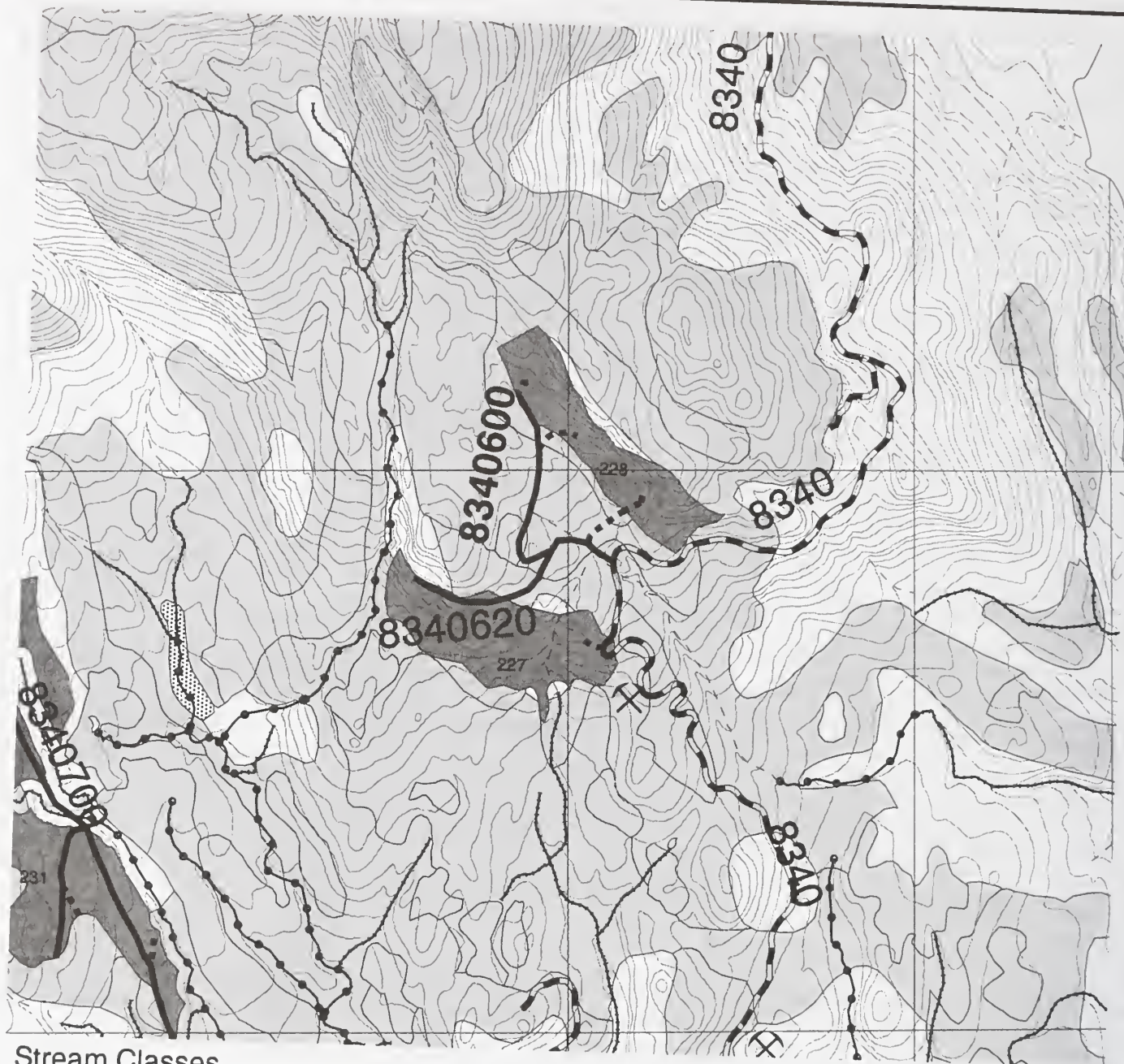
Aerial Photo Year: 91

Line:

Map Number: KTN B5 NE

Photo Number: 1390-

Scale: 1 inch = 1320 feet



Stream Classes

- Class 1 Streams
- Class 2 Streams
- Class 3 Streams

Roads

- Temp Spur
- Existing Road
- Proposed Road

Wetlands

- High Value Wetlands
- Other Wetlands
- 40' Contours
- Lakes
- Proposed Units
- Shoreline

4 inches = 1 mile



- Fish Passage Provided
- Fish Passage Failure
- Rock Pit
- Existing LTF

8340600 ■ Road Number

Road Data Card

Road Number: 8340620	ROD Road Number:	M.P. : 0.0	To M.P. : 0.30
Planned Length (miles): 0.30	Actual Length (miles):	New or Reconstruct:	new construction
Unit(s) Accessed: 227	Road Locator:		

ROAD MANAGEMENT OBJECTIVES

Functional Class: L	Traffic Service Level: D	Highway Safety Act Number:
Design Vehicle: LT	Critical Vehicle: LT	Intended Purpose and Use: Silvicultural
Maintain Level: Active Sale 2	Post Sale 1	AFRPR STATUS: close
Management Strategy (Encourage, Accept, Discourage, Eliminate or Prohibit): Eliminate		Closure Device: Barrier
Other Considerations:		Erosion Control: Water bar

CULTURAL RESOURCES as planned:

as located:

ENGINEERING/ROADS

Recon/Location Narrative/Design Considerations (major drainages, road grades, future access, etc.): Steep slope areas have been avoided to the extent possible, BMP 14.2 & 14.7, 12.17 and 14.8 should be utilized during final location and design.

Planned vs Implemented (describe changes and rational):

Rock Source(s) Location and Special Mitigation: No special concerns. Pits located as shown on map.

FISH HABITAT

No fisheries concerns identified.

Stream Crossings As Planned (0 -Class I 0 - Class II 0 - Class III):

Stream Crossings As Located (Class I Class II Class III):

Cataloged Stream Crossings As Located:

GEOLOGY/KARST as planned: No concerns.

as located:

LANDS/MINERALS as planned: No concerns.

as located:

RECREATION/VISUALS as planned: Along portions of road visible from Carroll Inlet: Where full bench cut, endhaul material where slopes are too steep to hold material. Mitigate effects of sidecast and landing area slash, within 30 feet of road shoulders, by endhauling slash to a nonimpacting area, cover with soil and shape to natural contours. WEA 2/23/98

as located:

SILVICULTURE as planned: No Concerns. CT 3/10/98

as located:

SOILS / WATERSHED as planned:

The 8340620 road is located on low value forested wetlands (BMPs 12.5 and 14.2). Use overlay road construction on wetlands and minimize side ditching, where practicable, to minimize the effects upon groundwater flow (BMP 14..3). Provide cross drains where needed to provide for the passage of surface water and aquatic organisms (BMP 12.5). This road has been located to avoid these steep, potentially unstable slopes (BMPs 14..2 and 14..7), field verify during final road location. Erosion control seeding of cutbanks and fillslopes should be implemented as soon as possible (BMPs 12.17, 14..8) following construction..

as located:

TIMBER/LOGGING SYSTEM/ADMINISTRATION as planned:No currently identified concerns AMG 3/11/98

as located:

WILDLIFE as planned: No mitigation measures.

as located:

Ranger's Signature

Date

Road Data Card

Road Number: 8340620

Aerial Photo Year: 91

Line:

Map Number: KTN B5 NE

Photo Number: 1390-

Scale: 1 inch = 1320 feet



Stream Classes

- Class 1 Streams
- Class 2 Streams
- Class 3 Streams

Roads

- Temp Spur
- Existing Road
- Proposed Road

Wetlands

- High Value Wetlands
- Other Wetlands
- 40' Contours
- Lakes
- Proposed Units
- Shoreline

4 inches = 1 mile



- Fish Passage Provided
- Fish Passage Failure
- Rock Pit
- Existing LTF

8340620 ■ Road Number

Road Data Card

Road Number: 8340700	ROD Road Number: 8340700	M.P. : 0.3	To M.P. : 2.00
Planned Length (miles): 1.70	Actual Length (miles):	New or Reconstruct:	reconst. & new const
Unit(s) Accessed: 231,132	Road Locator:		

ROAD MANAGEMENT OBJECTIVES

Functional Class: Local	Traffic Service Level: D	Highway Safety Act Number: NO
Design Vehicle: LT	Critical Vehicle: LT	Intended Purpose and Use: Silvicultural
Maintain Level: Active Sale 2	Post Sale 1	AFRPR STATUS: inactive
Management Strategy (Encourage, Accept, Discourage, Eliminate or Prohibit): teliminate		Closure Device: Barrier
Other Considerations:		Erosion Control: water bar

CULTURAL RESOURCES as planned: No Cultural Concerns JTA 2/5/98
as located: No Cultural Concerns JTA 2/5/98

ENGINEERING/ROADS

Recon/Location Narrative/Design Considerations (major drainages, road grades, future access, etc.):

Planned vs Implemented (describe changes and rational): During final road location, investigate alternate route to the west near class I stream to avoid crossing. No significant areas of steep slopes, >67%, were crossed or this location.

Rock Source(s) Location and Special Mitigation: No special concerns. Pits located as shown on map.

FISH HABITAT

Fish Passage will be required on all Class I and II stream crossings (BMP14.17). All instream road construction will be permitted between June 15 - August 7 for all Class I and Class II stream crossings (BMP 14.6). Additional timing restrictions may be required on some Class II and III streams after the final road location is reviewed by the District Biologist. Recommend developing a erosion control plan to minimize sedimentation to downstream fish habitat during installation of structures (BMP 14.5). Crossings of Class I and II streams to be buried cmp's or short term bridges. Field verify during final road location.

Stream Crossings As Planned (1 - Class I 2 - Class II 0 - Class III):

Stream Crossings As Located (Class I Class II Class III):

Cataloged Stream Crossings As Located:

GEOLOGY/KARST as planned: No concerns.
as located:

LANDS/MINERALS as planned: No concerns.
as located:

RECREATION/VISUALS as planned: No concerns.
as located:

SILVICULTURE as planned: No Concerns. CT 3/10/98
as located:

SOILS / WATERSHED as planned:

Much of the 8340700 road is located on low value forested wetlands (BMPs 12.5 and 14.2). A major portion of the road is located downslope from these wetlands (BMP 14.2). Use overlay road construction on wetlands and minimize side ditching, where practicable, to minimize the effects upon groundwater flow (BMP 14.3). Provide cross drains where needed to provide for the passage of surface water and aquatic organisms (BMP 12.5). Erosion control seeding of cutbanks and fillslopes should be implemented as soon as possible (BMPs 12.17 and 14.8) following construction.

as located:

TIMBER/LOGGING SYSTEM/ADMINISTRATION as planned: No currently identified concerns AMG 3/11/98
as located:

WILDLIFE as planned: No mitigation measures.
as located:

Ranger's Signature

Date

Road Data Card

Road Number: 8340700

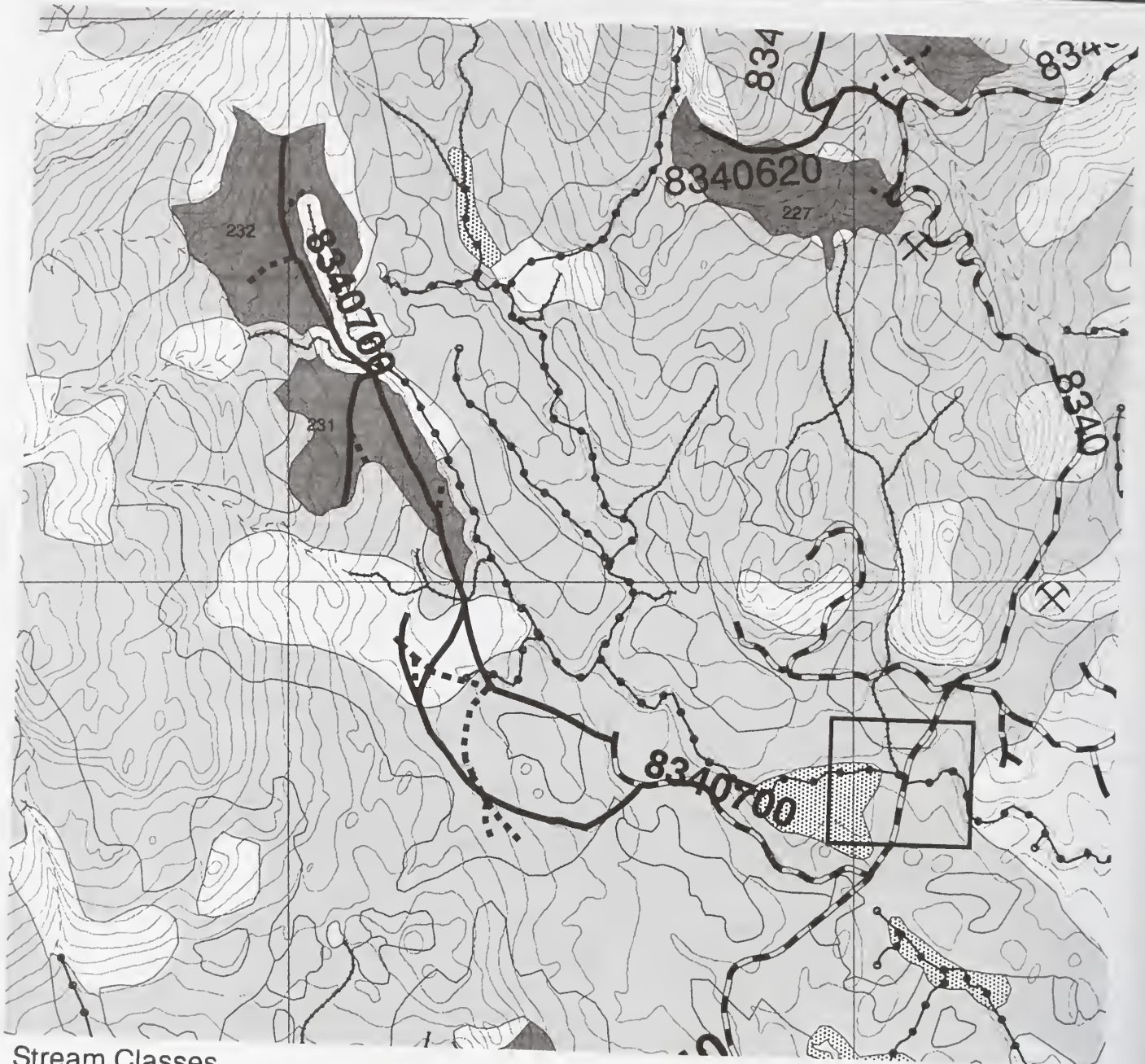
Aerial Photo Year: 91

Line:

Map Number: KTN B5 NE

Photo Number: 1390-

Scale: 1 inch = 1320 feet



Stream Classes

- Class 1 Streams
- Class 2 Streams
- Class 3 Streams

Roads

- Temp Spur
- Existing Road
- Proposed Road

Wetlands

- High Value Wetlands
- Other Wetlands
- 40' Contours
- Lakes
- Proposed Units
- Shoreline

4 inches = 1 mile



- Fish Passage Provided
- Fish Passage Failure
- Rock Pit
- Existing LTF

Road Data Card

Road Number: 8340800
Planned Length (miles): 1.00
Unit(s) Accessed: 235, 236

ROD Road Number: 8340800
Actual Length (miles):
Road Locator:

M.P.: 0.0 To M.P.: 1.00
New or Reconstruct: new const

ROAD MANAGEMENT OBJECTIVES

Functional Class: Local Traffic Service Level: D Highway Safety Act Number: NO
Design Vehicle: LT Critical Vehicle: LT Intended Purpose and Use: Silvicultural
Maintain Level: Active Sale 2 Post Sale 1 AFRPR STATUS: Close Closure Device: Barrier
Management Strategy (Encourage, Accept, Discourage, Eliminate or Prohibit): Eliminate Erosion Control: water bar at MP 0.00
Other Considerations:

CULTURAL RESOURCES as planned:
as located:

ENGINEERING/ROADS

Recon/Location Narrative/Design Considerations (major drainages, road grades, future access, etc.): No significant areas of steep slopes, >67%, were crossed on this location.

Planned vs Implemented (describe changes and rationale):

Rock Source(s) Location and Special Mitigation: No special concerns. Pits located as shown on map.

FISH HABITAT

No fisheries concerns have been identified during the planning phase. Timing restrictions may be necessary on some additional Class III streams after final road location is reviewed by District Biologist (BMP 14.6).

Stream Crossings As Planned (0 - Class I 0 - Class II 0 - Class III):

Stream Crossings As Located (Class I - Class II - Class III):

Cataloged Stream Crossings As Located:

GEOLOGY/KARST as planned: No concerns.
as located:

LANDS/MINERALS as planned: No concerns.
as located:

RECREATION/VISUALS as planned: No concerns.
as located:

SILVICULTURE as planned: No Concerns. CT 3/10/98
as located:

SOILS / WATERSHED as planned:

The 8340800 road is located on low value forested wetlands (BMPs 12.5 and 14.2). Use overlay road construction on wetlands and minimize side ditching, where practicable, to minimize the effects upon groundwater flow (BMP 14.3). Provide cross drains where needed to provide for the passage of surface water and aquatic organisms (BMP 12.5). Erosion control seeding of cutbanks and fillslopes should be implemented as soon as possible (BMPs 12.17 and 14.8) following construction..

as located:

TIMBER/LOGGING SYSTEM/ADMINISTRATION as planned: No currently identified concerns AMG 3/11/98
as located:

WILDLIFE as planned: No mitigation measures.
as located:

Ranger's Signature

Date

Road Data Card

Road Number: 8340800
Aerial Photo Year: 91

Line:

Map Number: KTN B5 NE
Photo Number: 1390-

Scale: 1 inch = 1320 feet



Stream Classes

- Class 1 Streams
- Class 2 Streams
- Class 3 Streams

Roads

- Temp Spur
- Existing Road
- Proposed Road

Wetlands

- High Value Wetlands
- Other Wetlands
- 40' Contours
- Lakes
- Proposed Units
- Shoreline

4 inches = 1 mile



- Fish Passage Provided
- Fish Passage Failure
- Rock Pit
- Existing LTF

8340800 ■ Road Number

Road Data Card

Road Number: 8340900	ROD Road Number: 8340900	M.P.: 0.0	To M.P.: 2.50
Planned Length (miles): .77 reconst 1.73 new const	Actual Length (miles):	New or Reconstruct:	reconst. & new const.
Unit(s) Accessed: 240,241	Road Locator:		

ROAD MANAGEMENT OBJECTIVES

Functional Class: Local	Traffic Service Level: D	Highway Safety Act Number: NO
Design Vehicle: LT	Critical Vehicle: LT	Intended Purpose and Use: Silvicultural
Maintain Level: Active Sale 2 Post Sale 1	AFRPR STATUS: inactive	Closure Device: barrier at MP 0.00
Management Strategy (Encourage, Accept, Discourage, Eliminate or Prohibit): eliminate	Erosion Control: water bar	
Other Considerations:		

CULTURAL RESOURCES as planned: No Cultural Concerns JTA 2/5/98
as located: No Cultural Concerns JTA 2/5/98

ENGINEERING/ROADS

Recon/Location Narrative/Design Considerations (major drainages, road grades, future access, etc.): No significant areas of steep slopes, >67%, were crossed on this location.

Planned vs Implemented (describe changes and rational):

Rock Source(s) Location and Special Mitigation: No special concerns. Pits located as shown on map.

FISH HABITAT

No fisheries concerns have been identified. Passage and/or timing restrictions may be required on some Class II and III streams after final road location is reviewed by District Biologist (BMP's 14.6 and 14.17). Crossings on class III streams will be with cmp's with diameter of less than 1200mm.

Stream Crossings As Planned (0 - Class I 0 - Class II 2 - Class III):

Stream Crossings As Located (Class I Class II Class III):

Cataloged Stream Crossings As Located:

GEOLOGY/KARST as planned: No concerns.
as located:

LANDS/MINERALS as planned: No concerns.
as located:

RECREATION/VISUALS as planned: Along portions of road visible from Carroll Inlet: (1) Where full bench cut, endhaul material where slopes are too steep to hold material. (2) Mitigate effects of sidecast and landing area slash, within 30 feet of road shoulders, by endhauling slash to a nonimpacting area, cover with soil and shape to natural contours. (3) For future recreational use, fully rehabilitate rockpit areas including grading floor to drain, cleanup, and finished grading of overburden and waste rock, and seeding. WEA 2/23/98
as located:

SILVICULTURE as planned: No Concerns. CT 3/10/98
as located:

SOILS / WATERSHED as planned:

Most of the 8340900 road is located on low value forested wetlands and scrub-shrub muskeg (BMPs 12.5 and 14.2). Use overlay road construction on wetlands and minimize side ditching, where practicable, to minimize the effects upon groundwater flow (BMP 14.3). Provide cross drains where needed to provide for the passage of surface water and aquatic organisms (BMP 12.5). Erosion control seeding of cutbanks and fillslopes should be implemented as soon as possible (BMPs 12.17 and 14.8) following construction and reconstruction. No side slopes in excess of 67% or unstable soils encountered.
as located:

TIMBER/LOGGING SYSTEM/ADMINISTRATION as planned: No currently identified concerns AMG 3/11/98
as located:

WILDLIFE as planned: No mitigation measures.
as located:

Ranger's Signature

Date

Road Data Card

Road Number: 8340900

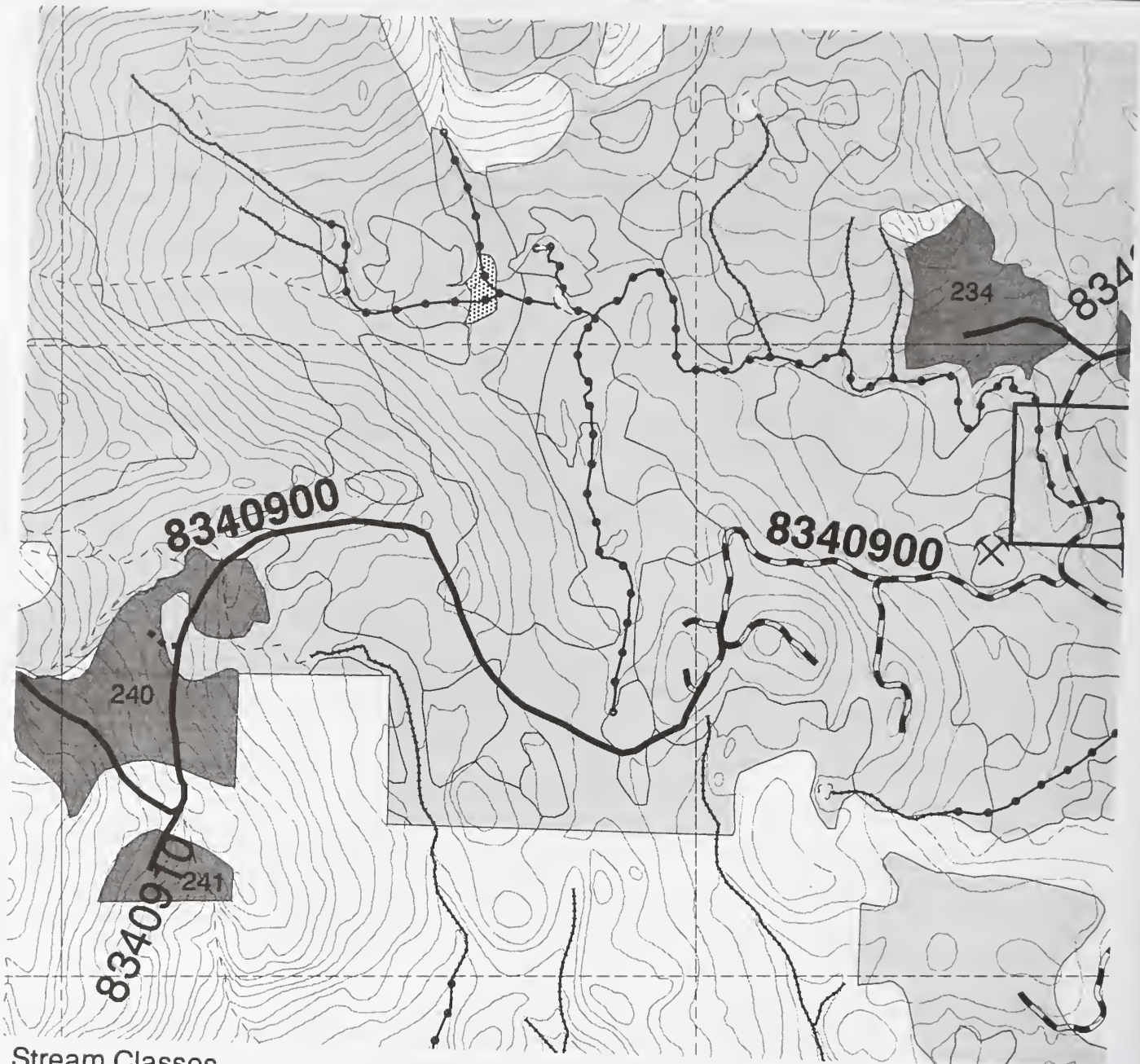
Aerial Photo Year: 91

Line:

Map Number: KYN B5 NE

Photo Number: 1390-

Scale: 1 inch = 1320 feet



Stream Classes

- Class 1 Streams
- Class 2 Streams
- Class 3 Streams

Roads

- Temp Spur
- Existing Road
- Proposed Road

Wetlands

- High Value Wetlands
- Other Wetlands
- 40' Contours
- Lakes
- Proposed Units
- Shoreline

4 inches = 1 mile



- Fish Passage Provided
- Fish Passage Failure
- Rock Pit
- Existing LTF

8340900 ■ Road Number

Road Data Card

Road Number: 8340910	ROD Road Number:	M.P.: 0.0	To M.P.: 0.3
Planned Length (miles): 0.30	Actual Length (miles):	New or Reconstruct:	new construction
Unit(s) Accessed: 241	Road Locator:		

ROAD MANAGEMENT OBJECTIVES

Functional Class: L	Traffic Service Level: D	Highway Safety Act Number: NO
Design Vehicle: LT	Critical Vehicle: LT	Intended Purpose and Use: Silvicultural
Maintain Level: Active Sale 2	Post Sale 1	AFRPR STATUS: Closed
Management Strategy (Encourage, Accept, Discourage, Eliminate or Prohibit): Eliminate		Closure Device: barrier
Other Considerations:		Erosion Control: water bar

CULTURAL RESOURCES as planned:
as located:

ENGINEERING/ROADS

Recon/Location Narrative/Design Considerations (major drainages, road grades, future access, etc.): No significant areas of steep slopes, >67%, were crossed on this location.

Planned vs Implemented (describe changes and rational):

Rock Source(s) Location and Special Mitigation: No special concerns. Pits located as shown on map.

FISH HABITAT

No fisheries concerns have been identified.

Stream Crossings As Planned (0 -Class I 0 - Class II 0 - Class III):

Stream Crossings As Located (Class I Class II Class III):

Cataloged Stream Crossings As Located:

GEOLOGY/KARST as planned:

No concerns.

as located:

LANDS/MINERALS as planned:

No concerns.

as located:

RECREATION/VISUALS as planned: For portions of new road and landing area visible from Carroll Inlet: Mitigate effects of sidecast and landing area slash, within 30 feet of road shoulders, by endhauling slash to a nonimpacting area, cover with soil and shape to natural contours. WEA 2/23/98

as located:

SILVICULTURE as planned: No Concerns. CT 3/10/98

as located:

SOILS / WATERSHED as planned:

Erosion control seeding of cutbanks and fillslopes should be implemented as soon as possible (BMPs 12.17 and 14.8) following construction.. No side slopes in excess of 67% or unstable soils encountered.

as located:

TIMBER/LOGGING SYSTEM/ADMINISTRATION as planned:No currently identified concerns AMG 3/11/98

as located:

WILDLIFE as planned: No mitigation measures.

as located:

Ranger's Signature

Date

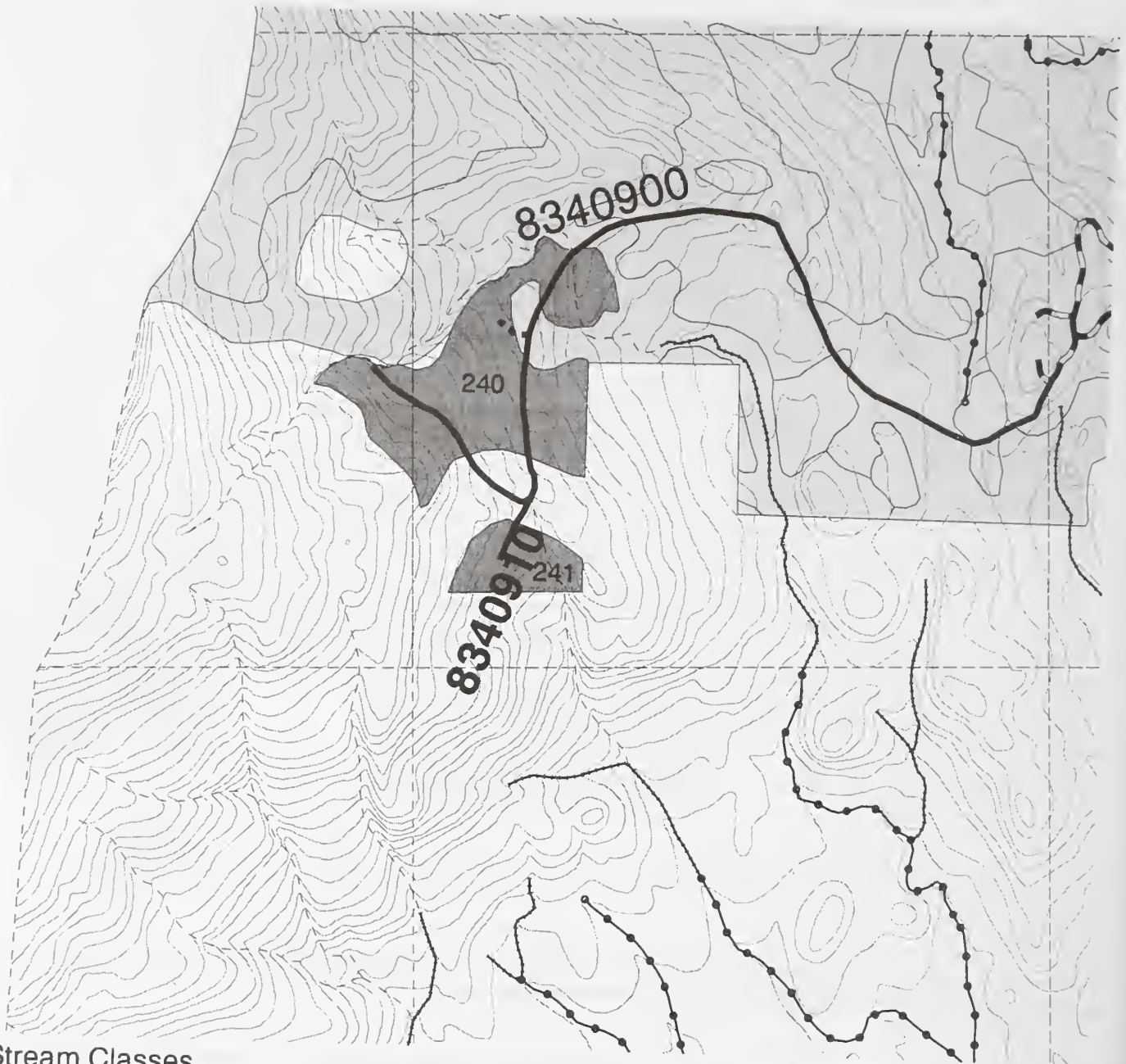
Road Data Card

Road Number: 8340910
Aerial Photo Year: 91

Line:

Map Number: KTN B5 NE
Photo Number: 1390-

Scale: 1 inch = 1320 feet



Stream Classes

- Class 1 Streams
- Class 2 Streams
- Class 3 Streams

Roads

- Temp Spur
- Existing Road
- Proposed Road

Wetlands

- High Value Wetlands
- Other Wetlands
- 40' Contours
- Lakes
- Proposed Units
- Shoreline

4 inches = 1 mile



- Fish Passage Provided
- Fish Passage Failure
- Rock Pit
- Existing LTF

8340910 ■ Road Number

Road Data Card

Road Number: 8340950	ROD Road Number: 8340950	M.P.: 0.0	To M.P.: 0.50
Planned Length (miles): 0.50	Actual Length (miles):	New or Reconstruct:	new const
Unit(s) Accessed: 237,238,239	Road Locator:		

ROAD MANAGEMENT OBJECTIVES

Functional Class: Local	Traffic Service Level: D	Highway Safety Act Number: NO
Design Vehicle: LT	Critical Vehicle: LT	Intended Purpose and Use: Silvicultural
Maintain Level: Active Sale 2 Post Sale 1	AFRPR STATUS: Closed	Closure Device: Barrier
Management Strategy (Encourage, Accept, Discourage, Eliminate or Prohibit): Eliminate	Erosion Control: water bar	
Other Considerations:		

CULTURAL RESOURCES as planned: No Cultural Concerns JTA 2/5/98
as located: No Cultural Concerns JTA 2/5/98

ENGINEERING/ROADS

Recon/Location Narrative/Design Considerations (major drainages, road grades, future access, etc.): No significant areas of steep slopes, >67%, were crossed on this location.

Planned vs Implemented (describe changes and rationale):

Rock Source(s) Location and Special Mitigation: No special concerns. Pits located as shown on map.

FISH HABITAT

Passage and timing restrictions will apply for the Class I streamcourse located on this road (BMP 14.17). All instream work must be completed between the dates of June 15 - August 7 (BMP 14.6). If possible, recommend relocating this road to the west to avoid all Class I streamcrossings. If the relocation of this road is not feasible, recommend installing a temporary log-stringer bridge along with developing an erosion control plan for the Class I streamcrossing to minimize sedimentation (BMP 14.5).

Stream Crossings As Planned (I -Class I 0 -Class II 0 -Class III):

Stream Crossings As Located (Class I Class II Class III):

Cataloged Stream Crossings As Located:

GEOLOGY/KARST as planned:

No concerns.

as located:

LANDS/MINERALS as planned:

No concerns.

as located:

RECREATION/VISUALS as planned:

No concerns.

as located:

SILVICULTURE as planned: No Concerns. CT 3/10/98

as located:

SOILS / WATERSHED as planned:

The 8340950 road is located mostly on low value forested wetlands, with some sections on medium value short sedge meadow wetlands (BMPs 12.5 and 14.2). Use overlay road construction on wetlands and minimize side ditching, where practicable, to minimize the effects upon groundwater flow (BMP 14.3). Provide cross drains where needed to provide for the passage of surface water and aquatic organisms (BMP 12.5). Erosion control seeding of cutbanks and fillslopes should be implemented as soon as possible (BMPs 12.17 and 14.8) following construction. No side slopes in excess of 67% or unstable soil areas encountered.

as located:

TIMBER/LOGGING SYSTEM/ADMINISTRATION as planned: No currently identified concerns AMG 3/11/98

as located:

WILDLIFE as planned: No mitigation measures.

as located:

Ranger's Signature

Date

Road Data Card

Road Number: 8340950

Aerial Photo Year: 91

Line:

Map Number: KTN B5 NE

Photo Number: 1390-

Scale: 1 inch = 1320 feet



Stream Classes

- Class 1 Streams
- Class 2 Streams
- Class 3 Streams

Roads

- Temp Spur
- Existing Road
- Proposed Road

Wetlands

- High Value Wetlands
- Other Wetlands
- 40' Contours
- Lakes
- Proposed Units
- Shoreline

4 inches = 1 mile



- Fish Passage Provided
- Fish Passage Failure
- Rock Pit
- Existing LTF

8340950 ■ Road Number

Sea Level Draft EIS

Road Data Card

Road Number: 8340953	ROD Road Number: 8340953	M.P.: 0.0	To M.P.: 0.50
Planned Length (miles): 0.50	Actual Length (miles):	New or Reconstruct:	new const
Unit(s) Accessed: 239	Road Locator:		

ROAD MANAGEMENT OBJECTIVES

Functional Class: Local	Traffic Service Level: D	Highway Safety Act Number: NO
Design Vehicle: LT	Critical Vehicle: LT	Intended Purpose and Use: Silvicultural
Maintain Level: Active Sale 2 Post Sale 1	AFRPR STATUS: Closed	Closure Device: Barrier
Management Strategy (Encourage, Accept, Discourage, Eliminate or Prohibit): Eliminate	Erosion Control: water bar	
Other Considerations:		

CULTURAL RESOURCES as planned:
as located:

ENGINEERING/ROADS

Recon/Location Narrative/Design Considerations (major drainages, road grades, future access, etc.): No significant areas of steep slopes, >67%, were crossed on this location.

Planned vs Implemented (describe changes and rational):

Rock Source(s) Location and Special Mitigation: No special concerns. Pits located as shown on map.

FISH HABITAT

No fisheries concerns identified. Passage and timing restrictions may apply for some Class II streams after final road location is reviewed by District Biologist (BMP's 14.6, 14.17).

Stream Crossings As Planned (0 - Class I 0 - Class II 0 - Class III):

Stream Crossings As Located (Class I Class II Class III):

Cataloged Stream Crossings As Located:

GEOLOGY/KARST as planned: No concerns.
as located:

LANDS/MINERALS as planned: No concerns.
as located:

RECREATION/VISUALS as planned: No concerns.
as located:

SILVICULTURE as planned: No Concerns. CT 3/10/98
as located:

SOILS / WATERSHED as planned:

The 8340953 road is located on low value forested wetlands and medium value short sedge meadow wetlands (BMPs 12.5 and 14.2). Use overlay road construction on wetlands and minimize side ditching, where practicable, to minimize the effects upon groundwater flow (BMP 14.3). Provide cross drains where needed to provide for the passage of surface water and aquatic organisms (BMP 12.5). Erosion control seeding of cutbanks and fillslopes should be implemented as soon as possible (BMPs 12.17 and 14.8) following construction.. No side slopes in excess of 67% or unstable soil areas encountered.

as located:

TIMBER/LOGGING SYSTEM/ADMINISTRATION as planned:No currently identified concerns AMG 3/11/98
as located:

WILDLIFE as planned: No mitigation measures.
as located:

Ranger's Signature

Date

Road Data Card

Road Number: 8340953

Aerial Photo

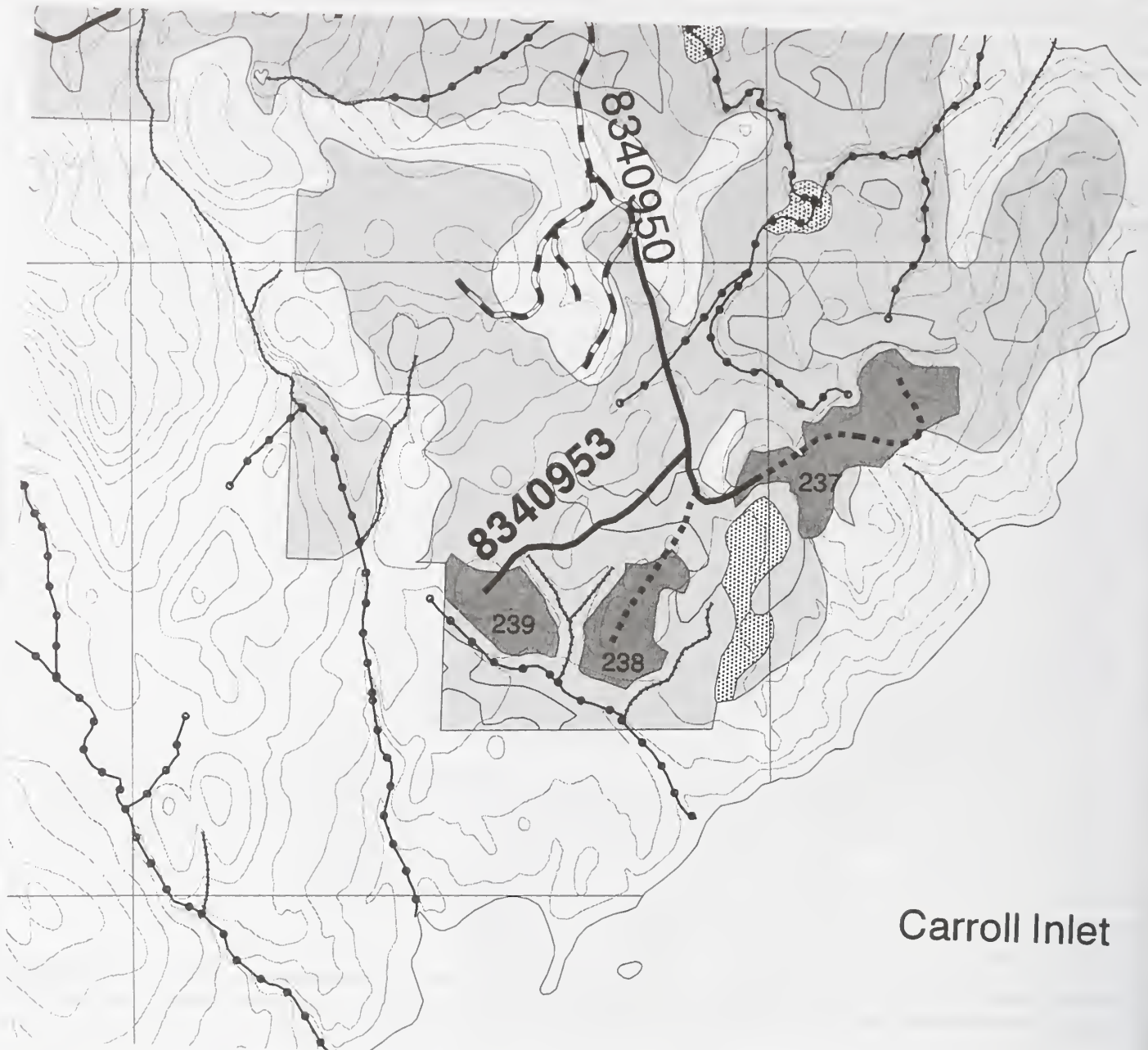
Year: 91

Line:

Map Number: KTN B5 NE

Photo Number: 1390-

Scale: 1 inch = 1320 feet



Carroll Inlet

Stream Classes

- Class 1 Streams
- Class 2 Streams
- Class 3 Streams

Roads

- Temp Spur
- Existing Road
- Proposed Road

Wetlands

- High Value Wetlands
- Other Wetlands
- 40' Contours
- Lakes
- Proposed Units
- Shoreline

4 inches = 1 mile



- Fish Passage Provided
- Fish Passage Failure
- Rock Pit
- Existing LTF

8340953 ■ Road Number

Sea Level Draft EIS

Road Map - 840000 Elf Point Construction

Road Number: 8400000 Elf Point a	ROD Road Number: 8400000 Elf point a	M.P.: 0.0	To M.P.: 10.3
Planned Length (miles): 10.3	Actual Length (miles):	New or Reconstruct:	reconst elf point
Unit(s) Accessed: Numerous	Road Locator:		

ROAD MANAGEMENT OBJECTIVES

Functional Class: Local	Traffic Service Level: D	Highway Safety Act Number: NO
Design Vehicle: LT	Critical Vehicle: LT	Intended Purpose and Use: Silvicultural
Maintain Level: Active Sale 2 Post Sale 1	AFRPR STATUS: Active	Closure Device:
Management Strategy (Encourage, Accept, Discourage, Eliminate or Prohibit): Accept		Erosion Control: Water bar
Other Considerations:		

CULTURAL RESOURCES as planned: as located:

ENGINEERING/ROADS

Recon/Location Narrative/Design Considerations (major drainages, road grades, future access, etc.): Note blasting restriction in wildlife section.

Planned vs Implemented (describe changes and rationale):

Rock Source(s) Location and Special Mitigation: No special concerns. Pits located as shown on map.

FISH HABITAT

Existing Road - No fisheries concerns have been identified during the planning stage. Culvert inspections are scheduled for the spring 1998 to verify specific maintenance concerns that will be needed for this road segment (BMP 11.6).

Proposed Road - Passage and timing restrictions are required for all Class I and Class II streams located on this proposed road (BMP 14.17 and 14.6). All instream construction must be completed between July 18 - August 7 (BMP 14.6). Timing restrictions may also be required for some Class III streams after final road location is reviewed by District Biologist. Recommend installing bridges and burying oversized CMP's to ensure proper fish passage for both anadromous and resident fish (BMP 14.17). Erosion control plan are required for this road to minimize sedimentation (BMP 14.5).

Stream Crossings As Planned (2 - Class I 4 - Class II 4 - Class III):

Stream Crossings As Located (Class I Class II Class III):

Cataloged Stream Crossings As Located:

GEOLOGY/KARST as planned: The southern sections of the 8400000 road are located in areas of low karst vulnerability. No special provision for the protection of karst values is considered necessary.

as located:

LANDS/MINERALS as planned: No concerns.

as located:

RECREATION/VISUALS as planned: Along portions of road visible from Thorne Arm: (1) Where full bench cut, endhaul material where slopes are too steep to hold material. (2) Mitigate effects of sidecast and landing area slash, within 30 feet of road shoulders, by endhauling slash to a nonimpacting area, cover with soil and shape to natural contours. (3) Locate and design rockpits to minimize visual impacts from saltwater viewpoints by retaining screen trees, and/or angling cut opening away from view and minimizing back wall heights. WEA 2/23/98

as located:

SILVICULTURE as planned: No Concerns. CT 3/10/98

as located:

SOILS / WATERSHED as planned: Avoid placement of fill material or sidecasting of waste material in wetland areas (BMPs 12.5 and 14.12) or on steep, potentially unstable side- slopes (BMPs 13.5 and 14.12). Erosion control seeding of cutbanks and fillslopes should be implemented as soon as possible (BMPs 12.17 and 14.8) following construction.

as located:

TIMBER/LOGGING SYSTEM/ADMINISTRATION as planned: No currently identified concerns AMG 3/11/98

as located:

WILDLIFE as planned: Road is within 0.5 miles of bald eagle nest. No blasting within 0.5 miles of eagle nest 3/1 -5/31. If nest is active, no blasting within 0.5 miles of nest 6/1 - 8/31.

as located:

Ranger's Signature

Date

Road Map - 840000 Elf Point Construction

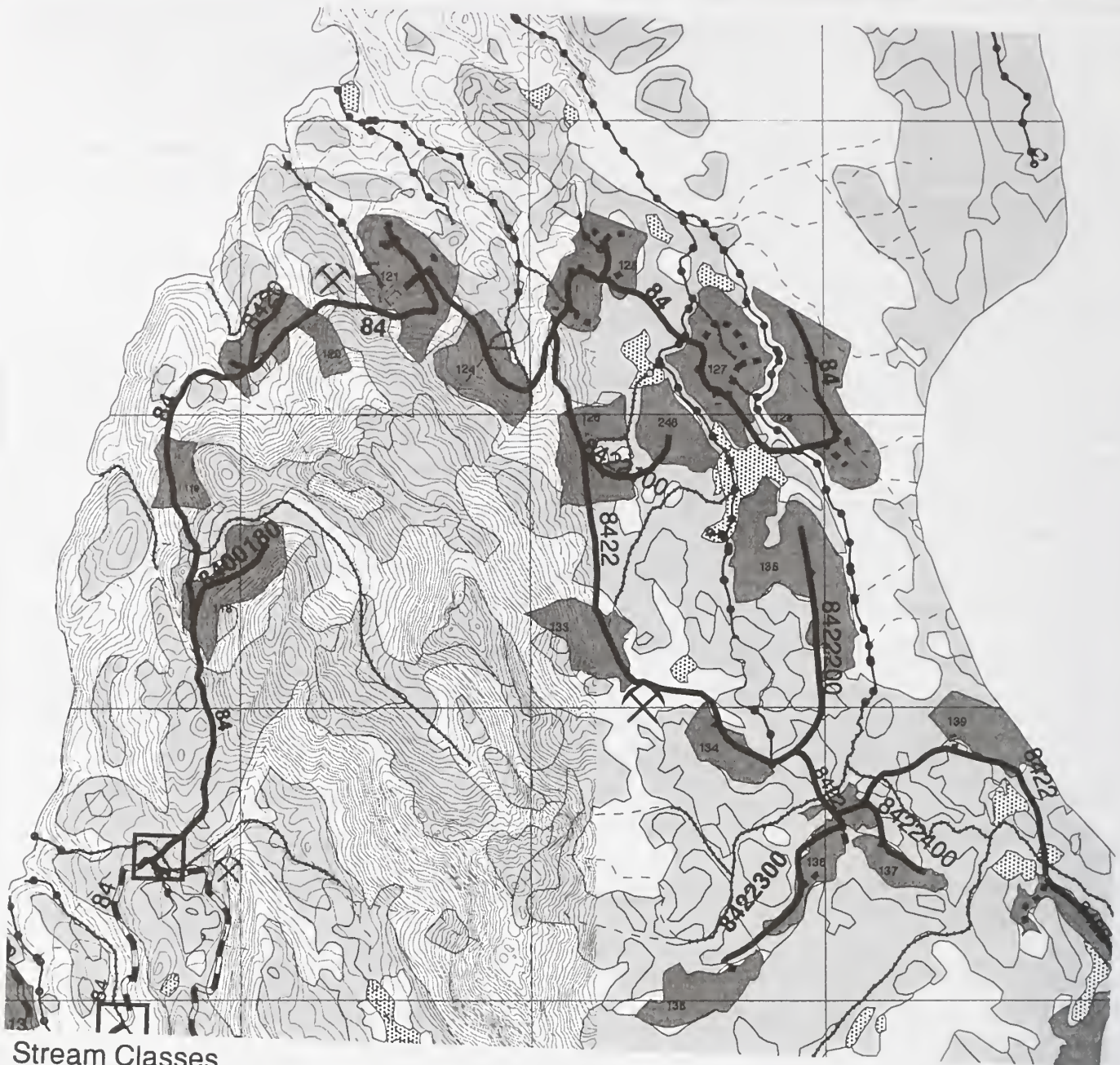
Road Number: 8400000 Elf Point a — New
Aerial Photo Year:

Line:

Map Number: KTN B4 SW

Photo Number:

Scale: 1 inch = 2640 feet



Stream Classes

- Class 1 Streams
- Class 2 Streams
- Class 3 Streams

Roads

- Temp Spur
- Existing Road
- Proposed Road

Wetlands

- High Value Wetlands
- Other Wetlands
- 40' Contours
- Lakes
- Proposed Units
- Shoreline

2 inches = 1 mile



Fish Passage Provided

Fish Passage Failure

Rock Pit

Existing LTF

Road Map - 840000 Elf Point Construction

Road Number: 840000 Elf Point a — Existing

Map Number:

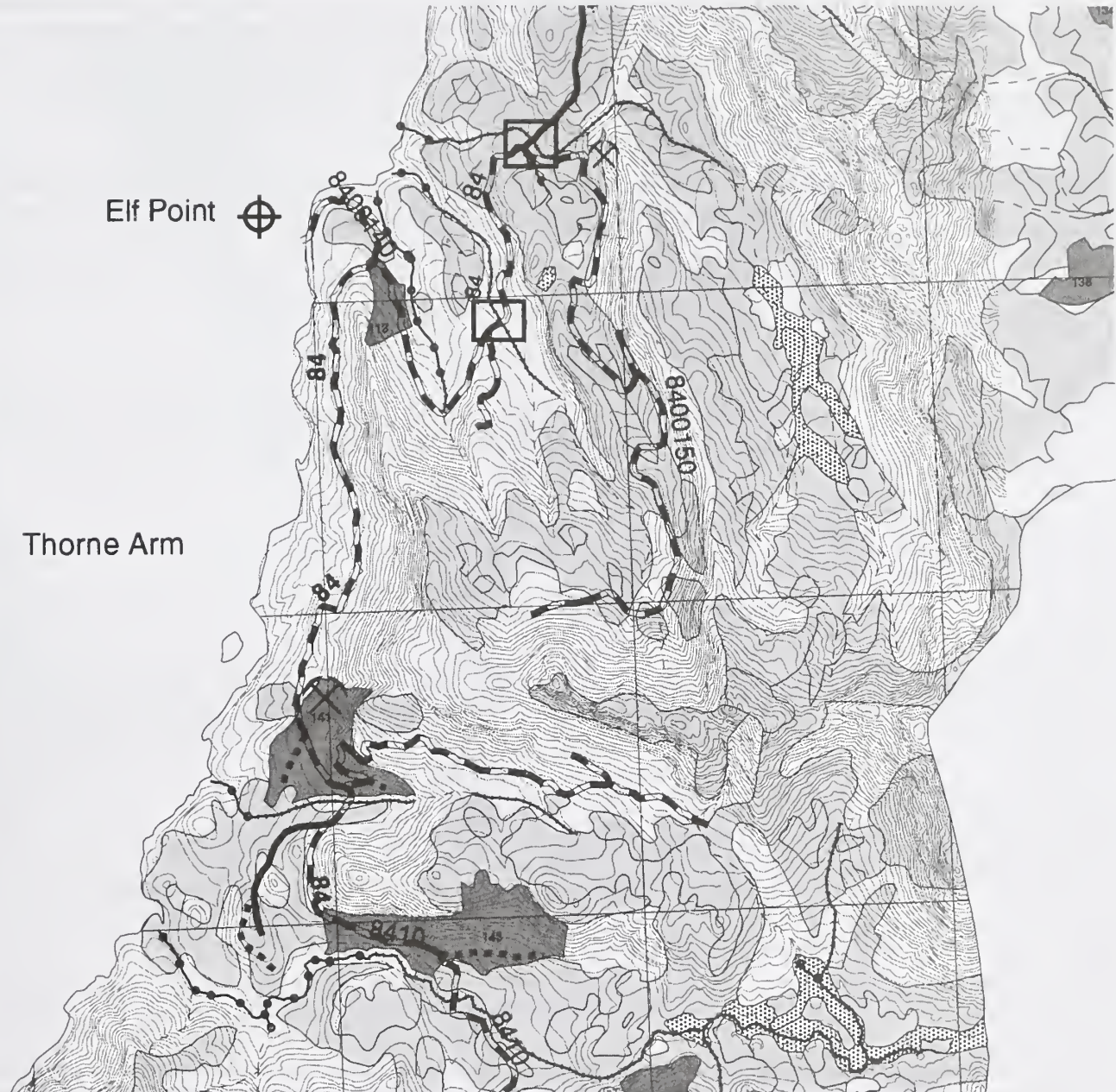
Scale: 2 inch = 1 miles

Aerial Photo

Year:

Line:

Photo Number:



Stream Classes

- Class 1 Streams
- Class 2 Streams
- Class 3 Streams

Roads

- Temp Spur
- Existing Road
- Proposed Road

Wetlands

- High Value Wetlands
- Other Wetlands
- 40' Contours
- Lakes
- Proposed Units
- Shoreline

2 inches = 1 mile



- Fish Passage Provided
- Fish Passage Failure
- Rock Pit
- Existing LTF

Road Data Card

Road Number: 8400000 Shoal Cove	ROD Road Number: 84	M.P.: 23.64	To M.P.: 37.85
Planned Length (miles):	Actual Length (miles):	New or Reconstruct:	reconstruction
Unit(s) Accessed: Numerous	Road Locator: existing		

ROAD MANAGEMENT OBJECTIVES

Functional Class: Local	Traffic Service Level: D	Highway Safety Act Number: NO
Design Vehicle: LT	Critical Vehicle: LB	Intended Purpose and Use: Silvicultural
Maintain Level: Active Sale 2 Post Sale 2	AFRPR STATUS: Active	Closure Device:
Management Strategy (Encourage, Accept, Discourage, Eliminate or Prohibit): Accept		Erosion Control:
Other Considerations:		

CULTURAL RESOURCES as planned: No Cultural Concerns JTA 2/5/98
as located: No Cultural Concerns JTA 2/5/98

ENGINEERING/ROADS

Recon/Location Narrative/Design Considerations (major drainages, road grades, future access, etc.):

Planned vs Implemented (describe changes and rational):

Rock Source(s) Location and Special Mitigation: No special concerns. Pits located as shown on map.

FISH HABITAT

Culvert inspections completed in 1997 identified a fish passage failure at milepost 26.91 (See Chapter 3 -Road Condition Survey) (BMP 14..17). Maintenance work is scheduled on this streamcrossing to ensure proper fish passage in 1998 (BMP 14..2). All instream maintenance work must be completed between July 18 and August 7. Due to the number of streamcrossings on this road, annual culvert inspections are recommended. Additional road survey's are planned for this road in 1998 to verify all critical maintenance concerns (BMP 11.6).

Stream Crossings As Planned (1 - Class I 0 - Class II 0 - Class III):

Stream Source(s) As Located (Class I Class II Class III):

Cataloged Stream Crossings As Located:

GEOLOGY/KARST as planned: No concerns.
as located:

LANDS/MINERALS as planned: No concerns.
as located:

RECREATION/VISUALS as planned: Along portions of reconstructed road visible from Carroll Inlet: (1) Mitigate effects of sidecast and landing area slash, within 30 feet of road shoulders, by endhauling slash to a nonimpacting area, cover with soil and shape to natural contours. (2) Locate and design rockpits to minimize visual impacts from saltwater viewpoints by retaining screen trees, and/or angling cut opening away from view and minimizing back wall heights. WEA 2/23/98

as located:

SILVICULTURE as planned: No Concerns. CT 3/10/98
as located:

SOILS / WATERSHED as planned:

Erosion control seeding of cutbanks and fillslopes should be implemented as soon as possible (BMPs 12.17 and 14..8) following construction..

as located:

TIMBER/LOGGING SYSTEM/ADMINISTRATION as planned:No currently identified concerns AMG 3/11/98

as located:

WILDLIFE as planned: Road is within 0.5 miles of bald eagle nest. No blasting within 0.5 miles of eagle nest 3/1 -5/31. If nest is active, no blasting within 0.5 miles of nest 6/1 - 8/31.

as located:

Ranger's Signature

Date

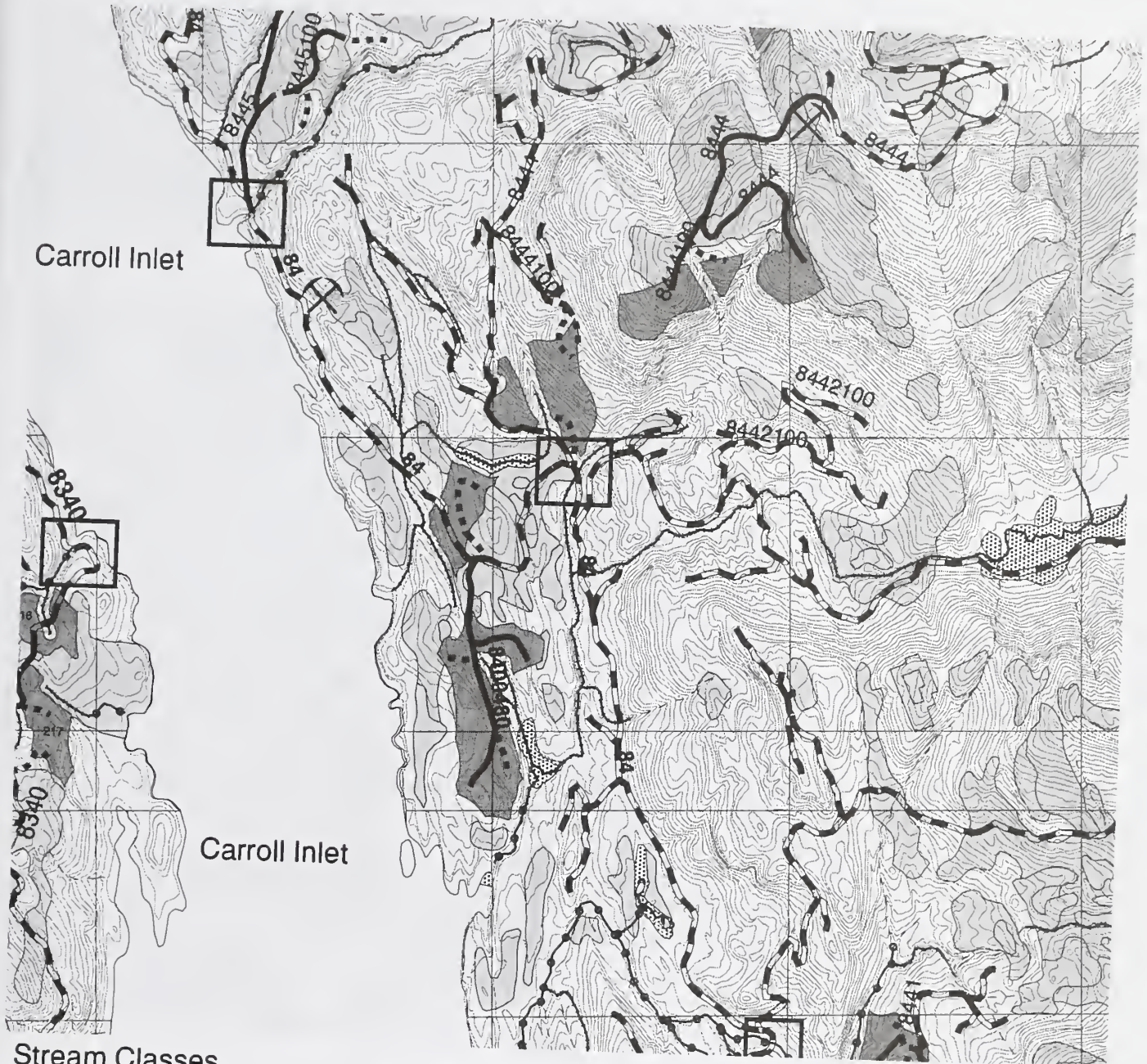
Road Data Card

Road Number: 8400000 Shoal Cove
Aerial Photo Year: 91

Line:

Map Number: KTN B4 NW
Photo Number:

Scale: 1 inch = 2640 feet



Stream Classes

- Class 1 Streams
- Class 2 Streams
- Class 3 Streams

Roads

- Temp Spur
- Existing Road
- Proposed Road

Wetlands

- High Value Wetlands
- Other Wetlands
- 40' Contours
- Lakes
- Proposed Units
- Shoreline

2 inches = 1 mile



- Fish Passage Provided
- Fish Passage Failure
- Rock Pit
- Existing LTF

Road Data Card

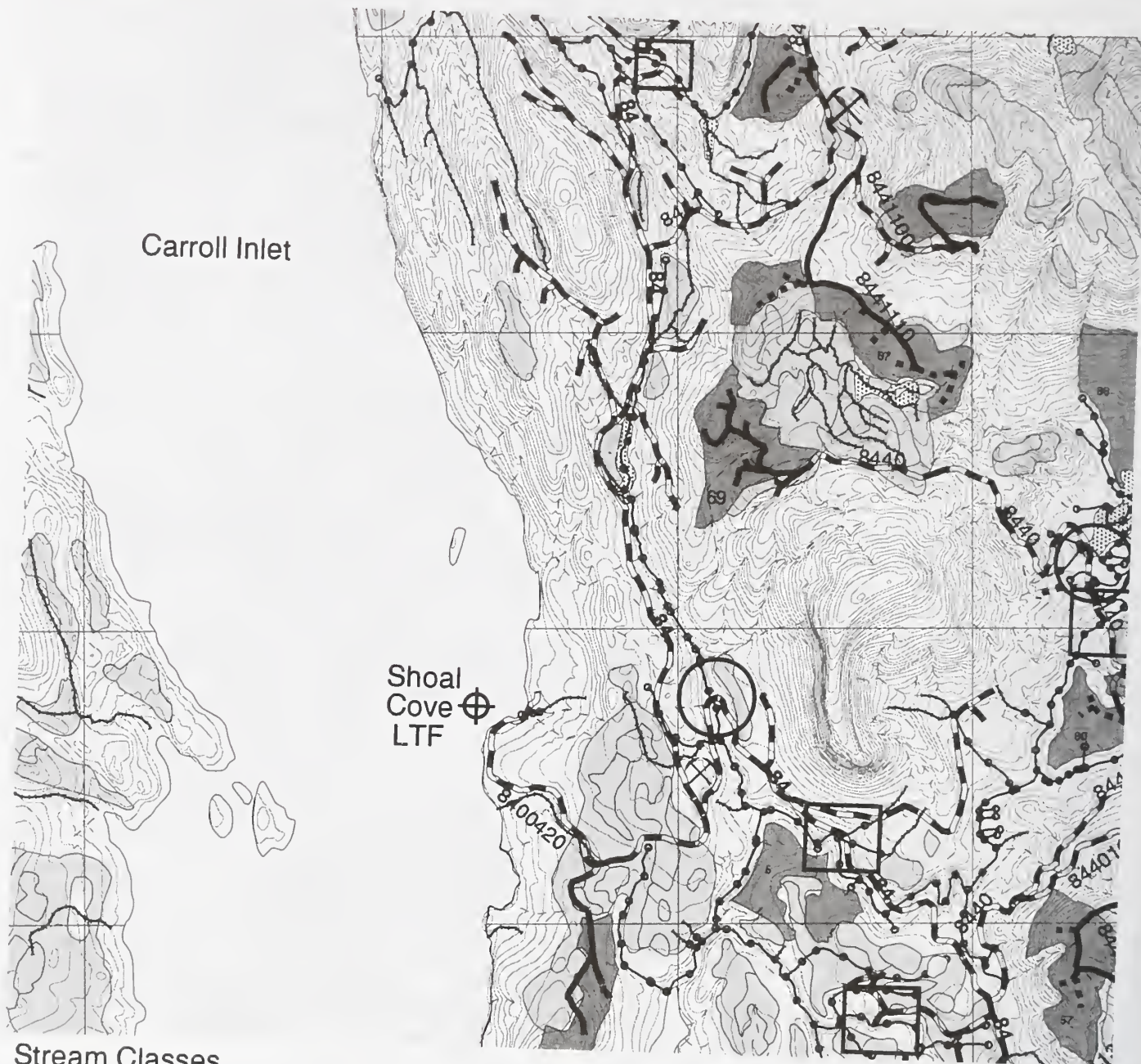
Road Number: 8400000 Shoal Cove
Aerial Photo Year:

Line:

Map Number:

Photo Number:

Scale: 1 inch = 15840 feet



Stream Classes

- Class 1 Streams
- Class 2 Streams
- Class 3 Streams

Roads

- Temp Spur
- Existing Road
- Proposed Road

Wetlands

- High Value Wetlands
- Other Wetlands
- 40' Contours
- Lakes
- Proposed Units
- Shoreline

2 inches = 1 mile



- Fish Passage Provided
- Fish Passage Failure
- Rock Pit
- Existing LTF

Road Data Card

Road Number: 8400140 Elf Point	ROD Road Number:	M.P.: 0.0	To M.P.: 0.5
Planned Length (miles): 0.5	Actual Length (miles):	New or Reconstruct:	Reconstr and LTF
Unit(s) Accessed: Numerous	Road Locator:		

ROAD MANAGEMENT OBJECTIVES

Functional Class: L	Traffic Service Level: D	Highway Safety Act Number:
Design Vehicle: LT	Critical Vehicle: LT	Intended Purpose and Use: Silvicultural
Maintain Level: Active Sale 2	Post Sale 1	AFRPR STATUS: Active
Management Strategy (Encourage, Accept, Discourage, Eliminate or Prohibit): Discourage		Closure Device:
Other Considerations: LTF and Access road - leave open		Erosion Control: water bar

CULTURAL RESOURCES as planned: No Cultural Concerns JTA 2/5/98
as located: No Cultural Concerns JTA 2/5/98

ENGINEERING/ROADS

Recon/Location Narrative/Design Considerations (major drainages, road grades, future access, etc.):

Planned vs Implemented (describe changes and rational):

Rock Source(s) Location and Special Mitigation: No special concerns. Pits located as shown on map.

FISH HABITAT

No fisheries concerns identified.

Stream Crossings As Planned (0 - Class I 0 - Class II 0 - Class III):

Stream Crossings As Located (Class I Class II Class III):

Cataloged Stream Crossings As Located:

GEOLOGY/KARST as planned: No concerns.

as located:

LANDS/MINERALS as planned: No concerns.

as located:

RECREATION/VISUALS as planned: No concerns

as located:

SILVICULTURE as planned: No concerns

as located:

SOILS / WATERSHED as planned: Erosion control seeding of cutbanks and fillslopes should be implemented as soon as possible (BMPs 12.17, 14.8).

as located:

TIMBER/LOGGING SYSTEM/ADMINISTRATION as planned:No currently identified concerns AMG 3/11/98

as located:

WILDLIFE as planned: Road is within 0.5 miles of bald eagle nest. No blasting within 0.5 miles of eagle nest 3/1 - 5/31. If nest is active, no blasting within 0.5 miles of nest 6/1 - 8/31.

as located:

Ranger's Signature

Date

Road Data Card

Road Number: 8400140 Elf Point

Map Number:

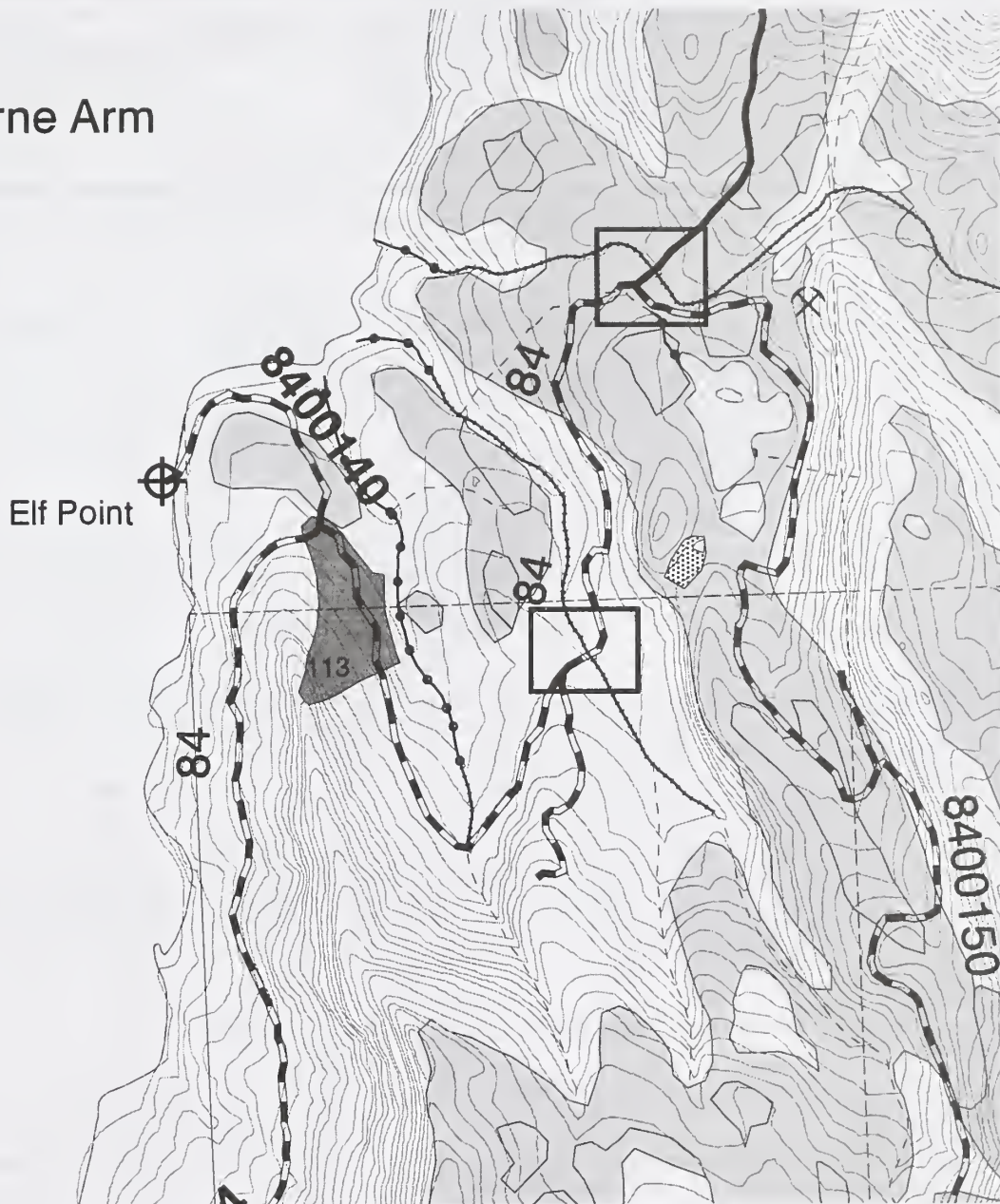
Scale: 1 inch = 1320 feet

Aerial Photo Year:

Line:

Photo Number:

Thorne Arm



Stream Classes

- Class 1 Streams
- Class 2 Streams
- Class 3 Streams

Roads

- Temp Spur
- Existing Road
- Proposed Road

Wetlands

- High Value Wetlands
- Other Wetlands
- 40' Contours
- Lakes
- Proposed Units
- Shoreline

4 inches = 1 mile



- Fish Passage Provided
- Fish Passage Failure
- Rock Pit
- Existing LTF

Road Data Card

Road Number: 8400180	ROD Road Number: 8400180	M.P. : 0.0	To M.P. : 0.30
Planned Length (miles): 0.30	Actual Length (miles):	New or Reconstruct:	new construction
Unit(s) Accessed: 118	Road Locator:		

ROAD MANAGEMENT OBJECTIVES

Functional Class: Local	Traffic Service Level: D	Highway Safety Act Number: NO
Design Vehicle: LT	Critical Vehicle: LT	Intended Purpose and Use: Silvicultural
Maintain Level: Active Sale 2 Post Sale 1	AFRPR STATUS: closed	Closure Device: Barrier
Management Strategy (Encourage, Accept, Discourage, Eliminate or Prohibit): Eliminate		Erosion Control: water bar
Other Considerations:		

CULTURAL RESOURCES as planned:

as located:

ENGINEERING/ROADS

Recon/Location Narrative/Design Considerations (major drainages, road grades, future access, etc.): This road location crosses some steep and/or unstable soils, see Soils section regarding restrictions.

Planned vs Implemented (describe changes and rational):

Rock Source(s) Location and Special Mitigation: No special concerns. Pits located as shown on map.

FISH HABITAT

No fisheries concerns have been identified during the planning phase.

Stream Crossings As Planned (0 - Class I 0 - Class II 0 - Class III):

Stream Crossings As Located (Class I Class II Class III):

Cataloged Stream Crossings As Located:

GEOLOGY/KARST as planned: High landslide potential along parts of the planned alignment. See Soils/Watershed for mitigation measures.

as located:

LANDS/MINERALS as planned: No concerns.

as located:

RECREATION/VISUALS as planned: Along portions of road visible from Thome Arm: (1) Where full bench cut, endhaul material where slopes are too steep to hold material. (2) Mitigate effects of sidecast and landing area slash, within 30 feet of road shoulders, by endhauling slash to a nonimpacting area, cover with soil and shape to natural contours. WEA 2/23/98

as located:

SILVICULTURE as planned: No Concerns. CT 3/10/98

as located:

SOILS / WATERSHED as planned: This road has been located to avoid wetlands to the maximum extent possible (BMPs 12.5, 14.2). It is however, located on steep, potentially unstable slopes (BMP 13.5). The planned road alignment also avoids much of the potentially unstable slopes (BMP 14..2). However some of the road segment may require full-bench design in the southwest and central parts of Unit 118 (BMP 14.7) to maintain slope stability. Limit blasting for road construction and rock pit development when soils are saturated (BMPs 14.6 and 14.18). Erosion control seeding of cutbanks and fillslopes should be implemented as soon as possible (BMPs 12.17, 14.5).

as located:

TIMBER/LOGGING SYSTEM/ADMINISTRATION as planned: No currently identified concerns AMG 3/11/98

as located:

WILDLIFE as planned: Road is within 0.5 miles of bald eagle nest. No blasting within 0.5 miles of eagle nest 3/1 -5/31. If nest is active, no blasting within 0.5 miles of nest 6/1 - 8/31.

as located:

Ranger's Signature

Date

Road Data Card

Road Number: 8400180

Aerial Photo Year: 91

Map Number: KTN B4 SW

Line:

Photo Number: 1390-139

Scale: 1 inch = 4 miles

Thorne Arm



Stream Classes

- Class 1 Streams
- Class 2 Streams
- Class 3 Streams

Roads

- Temp Spur
- Existing Road
- Proposed Road

Wetlands

- High Value Wetlands
- Other Wetlands
- 40' Contours
- Lakes
- Proposed Units
- Shoreline

4 inches = 1 mile



- Fish Passage Provided
- Fish Passage Failure
- Rock Pit
- Existing LTF

Road Data Card

Road Number: 8400270	ROD Road Number:	M.P.: 0.0	To M.P.: 0.25
Planned Length (miles): 0.25	Actual Length (miles):	New or Reconstruct:	NEW
Unit(s) Accessed: 45	Road Locator:		

ROAD MANAGEMENT OBJECTIVES

Functional Class: L	Traffic Service Level: D	Highway Safety Act Number:
Design Vehicle: LT	Critical Vehicle: LT	Intended Purpose and Use: Silvicultural
Maintain Level: Active Sale 2	Post Sale 1	AFRPR STATUS: Closed
Management Strategy (Encourage, Accept, Discourage, Eliminate or Prohibit): Eliminate		Closure Device: barrier
Other Considerations:		Erosion Control: water bar

CULTURAL RESOURCES as planned: No Cultural Concerns JTA 2/5/98
as located: No Cultural Concerns JTA 2/5/98

ENGINEERING/ROADS

Recon/Location Narrative/Design Considerations (major drainages, road grades, future access, etc.): No significant areas of steep slopes, >67%, were crossed on this location.

Planned vs Implemented (describe changes and rationale):

Rock Source(s) Location and Special Mitigation: No special concerns. Pits located as shown on map.

FISH HABITAT

No fisheries concerns

Stream Crossings As Planned (0 - Class I 0 - Class II 0 - Class III):

Stream Crossings As Located (Class I Class II Class III):

Cataloged Stream Crossings As Located:

GEOLOGY/KARST as planned: No concerns.

as located:

LANDS/MINERALS as planned: No concerns.

as located:

RECREATION/VISUALS as planned: No concerns.

as located:

SILVICULTURE as planned: No Concerns. CT 3/10/98

as located:

SOILS / WATERSHED as planned: Roads have been located to avoid wetland areas (BMP 14.2) to the extent possible. The lower end of this road segment is located on an area of low value wetlands. Steep slopes to the southeast prevent access of this area from that direction (BMP 13.5). Use overlay road construction with minimal side ditching on these wetlands to minimize the disruption of groundwater flow (BMPs 12.5 and 14.3). Avoid using these wetlands as disposal sites for waste material and logging slash (BMP 14.19). Erosion control seeding of cutbanks and fillslopes should be implemented as soon as possible (BMPs 12.17, 14.8).

as located:

TIMBER/LOGGING SYSTEM/ADMINISTRATION as planned: No currently identified concerns AMG 3/11/98

as located:

WILDLIFE as planned: No mitigation measures.

as located:

Ranger's Signature

Date

Road Data Card

Road Number: 8400270

Aerial Photo Year: 91

Line:




Map Number: KTN B5 SW

Photo Number:




Scale: 1 inch = 1320 feet









Stream Classes

-  Class 1 Streams
-  Class 2 Streams
-  Class 3 Streams

Roads





-  Temp Spur
-  Existing Road
-  Proposed Road

Wetlands

-  High Value Wetlands
-  Other Wetlands
-  40' Contours
-  Lakes
-  Proposed Units
-  Shoreline

4 inches = 1 mile



-  Fish Passage Provided
-  Fish Passage Failure
-  Rock Pit
-  Existing LTF

Road Data Card

Road Number: 8400280	ROD Road Number: 8400280	M.P.: 0.0	To M.P.: 1.06
Planned Length (miles):	Actual Length (miles): 1.06	New or Reconstruct:	reconstruction
Unit(s) Accessed: 44,43	Road Locator: existing		

ROAD MANAGEMENT OBJECTIVES

Functional Class: Local	Traffic Service Level: D	Highway Safety Act Number: NO
Design Vehicle: LT	Critical Vehicle: LT	Intended Purpose and Use: Silvicultural
Maintain Level: Active Sale 2 Post Sale 1	AFRPR STATUS: Closed	Closure Device: Barrier
Management Strategy (Encourage, Accept, Discourage, Eliminate or Prohibit): Eliminate		Erosion Control: water bar
Other Considerations: Remove culverts on protected streams, water bar entire length		

CULTURAL RESOURCES as planned:
as located:

ENGINEERING/ROADS

Recon/Location Narrative/Design Considerations (major drainages, road grades, future access, etc.): No major reconstruction planned, prehaul and post haul maintenance will accommodate maintenance needs.

Planned vs Implemented (describe changes and rational):

Rock Source(s) Location and Special Mitigation: No special concerns. Pits located as shown on map.

FISH HABITAT

Road Condition Survey's (See Appendix E) conducted in 1997 verified all culverts have been removed from this road (BMP 11.6). Four water quality stream crossings were identified during the survey.

Stream Crossings As Planned (0 - Class I 0 - Class II 4 - Class III):

Stream Crossings As Located (Class I Class II Class III):

Cataloged Stream Crossings As Located:

GEOLOGY/KARST as planned: No concerns.
as located:

LANDS/MINERALS as planned: No concerns.
as located:

RECREATION/VISUALS as planned: No concerns.
as located:

SILVICULTURE as planned: No Concerns. CT 3/10/98
as located:

SOILS / WATERSHED as planned: Erosion control seeding of cutbanks and fillslopes should be implemented as soon as possible (BMPs 12.17, 14.8) following reconstruction.
as located:

TIMBER/LOGGING SYSTEM/ADMINISTRATION as planned:No currently identified concerns AMG 3/11/98
as located:

WILDLIFE as planned: Road is within 0.5 miles of bald eagle nest. No blasting within 0.5 miles of eagle nest 3/1 -5/31. If nest is active, no blasting within 0.5 miles of nest 6/1 - 8/31.
as located:

Ranger's Signature

Date

Road Data Card

Road Number: 8400280

Map Number: KTN B4 SW

Scale: 1 inch = 1320 feet

Aerial Photo Year: 91

Line:

Photo Number: 1390-145



Stream Classes

- Class 1 Streams
- Class 2 Streams
- Class 3 Streams

Roads

- Temp Spur
- Existing Road
- Proposed Road

Wetlands

- High Value Wetlands
- Other Wetlands
- 40' Contours
- Lakes
- Proposed Units
- Shoreline

4 inches = 1 mile



- Fish Passage Provided
- Fish Passage Failure
- Rock Pit
- Existing LTF

Road Data Card

Road Number: 8400281
Planned Miles 0.6
Unit(s) Accessed: 43

ROD Road Number: 8400281
Actual Length (miles):
Road Locator:

M.P.: 0.0 To M.P.: 0.6
New or Reconstruct: new construction

ROAD MANAGEMENT OBJECTIVES

Functional Class: Local Traffic Service Level: D Highway Safety Act Number: NO
Design Vehicle: LT Critical Vehicle: LT Intended Purpose and Use: Silvicultural
Maintain Level: Active Sale 2 Post Sale 1 Closure Device: Barrier
Management Strategy (Encourage, Accept, Discourage, Eliminate or Prohibit): Eliminate
Other Considerations: Remove culverts on protected streams, water bar entire length
Erosion Control:

CULTURAL RESOURCES as planned: No Cultural Concerns JTA 2/5/98
as located: No Cultural Concerns JTA 2/5/98

ENGINEERING/ROADS

Recon/Location Narrative/Design Considerations (major drainages, road grades, future access, etc.): No significant areas of steep slopes, >67%, were crossed on this location.

Planned vs Implemented (describe changes and rational):

Rock Source(s) Location and Special Mitigation: No special concerns. Pits located as shown on map.

FISH HABITAT

No fisheries concerns identified during the planning phase. Additional reconnaissance is required after final road location is completed.

Stream Crossings As Planned (0 - Class I 0 - Class II 1 - Class III):

Stream Crossings As Located (Class I Class II Class III):

Cataloged Stream Crossings As Located:

GEOLOGY/KARST as planned: High landslide potential. See Soils/Watershed for mitigation measures.

as located:

LANDS/MINERALS as planned: No concerns.

as located:

RECREATION/VISUALS as planned: No concerns.

as located:

SILVICULTURE as planned: No Concerns. CT 3/10/98

as located:

SOILS / WATERSHED as planned: This road is located in an area of generally high landslide potential (MMI=3) (BMP 13.5). The planned road location avoids these high landslide potential areas (BMP 14.2). Erosion control seeding of cutbanks and fillslopes should be implemented as soon as possible (BMPs 12.17, 14.8) following construction.

as located:

TIMBER/LOGGING SYSTEM/ADMINISTRATION as planned: No currently identified concerns AMG 3/11/98

as located:

WILDLIFE as planned: Road is within 0.5 miles of bald eagle nest. No blasting within 0.5 miles of eagle nest 3/1 - 5/31. If nest is active, no blasting within 0.5 miles of nest 6/1 - 8/31.

as located:

Ranger's Signature

Date

Road Data Card

Road Number: 8400281

Aerial Photo

Year: 91

Line:

Map Number: KTN B4 NW

Photo Number: 1390-110

Scale: 1 inch = 1320 feet



Stream Classes

- Class 1 Streams
- Class 2 Streams
- Class 3 Streams

Roads

- Temp Spur
- Existing Road
- Proposed Road

Wetlands

- High Value Wetlands
- Other Wetlands
- 40' Contours
- Lakes
- Proposed Units
- Shoreline

4 inches = 1 mile



- Fish Passage Provided
- Fish Passage Failure
- Rock Pit
- Existing LTF

Road Data Card

Road Number: 8400300	ROD Road Number: 8400300	M.P.: 0.0	To M.P.: 0.75
Planned Length (miles): 0.40 new	Actual Length (miles): 0.56	New or Reconstruct:	reconst. & new const.
Unit(s) Accessed: 46	Road Locator: existing		

ROAD MANAGEMENT OBJECTIVES

Functional Class: Local	Traffic Service Level: D	Highway Safety Act Number: NO
Design Vehicle: LT	Critical Vehicle: LT	Intended Purpose and Use: Silvicultural
Maintain Level: Active Sale 2 Post Sale 1	AFRPR STATUS: Closed	Closure Device: Barrier
Management Strategy (Encourage, Accept, Discourage, Eliminate or Prohibit): Eliminate		Erosion Control: water bar
Other Considerations: Remove culverts on protected streams, water bar entire length		

CULTURAL RESOURCES as planned: as located:

ENGINEERING/ROADS

Recon/Location Narrative/Design Considerations (major drainages, road grades, future access, etc.): No major reconstruction planned, prehaul and post haul maintenance will accommodate maintenance needs. No significant areas of steep slopes, >67%, were crossed on the new construction location.

Planned vs Implemented (describe changes and rational):

Rock Source(s) Location and Special Mitigation: No special concerns. Pits located as shown on map.

FISH HABITAT

Road Condition Survey's verified that all CMP's have been removed from this road (BMP 11.6). During reconstruction, fish passage will be required for the one Class I (adfluvial) stream located on this road (BMP 14.17). Recommend installing a bridge or burying an oversize pipe to provide proper fish passage and developing a erosion control plan to minimize sedimentation during reconstruction (BMP 14.5 and 14.17). Field reconnaissance is required to verify stream classifications along this road.

Stream Crossings As Planned (I - Class I 0 -Class II 2 - Class III):

Stream Crossings As Located (Class I Class II Class III):

Cataloged Stream Crossings As Located:

GEOLOGY/KARST as planned: No concerns. as located:

LANDS/MINERALS as planned: Unit located along Misty Fiords National Monument boundary. Will require boundary survey prior to road survey. as located:

RECREATION/VISUALS as planned: No concerns. as located:

SILVICULTURE as planned: No concerns. CT 3/11/98 as located:

SOILS / WATERSHED as planned: Erosion control seeding of cutbanks and fillslopes should be implemented as soon as possible (BMPs 12.17, 14.8) following reconstruction. as located:

TIMBER/LOGGING SYSTEM/ADMINISTRATION as planned: No currently identified concerns AMG 3/11/98 as located:

WILDLIFE as planned: No wildlife mitigation. as located:

Ranger's Signature

Date

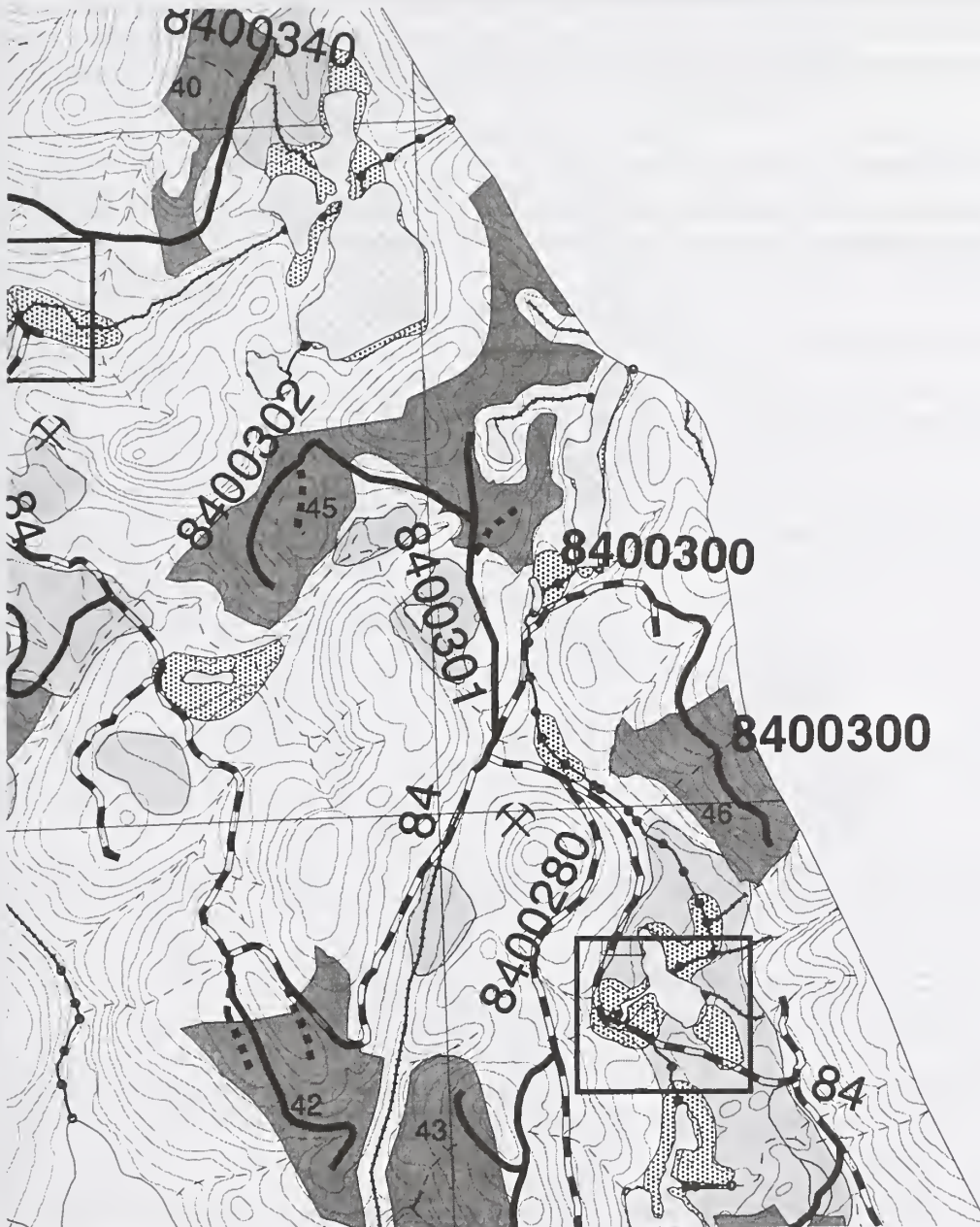
Road Data Card

Road Number: 8400300
Aerial Photo Year: 91

Line:

Map Number: KTN B4 NW
Photo Number: 1390-146

Scale: 1 inch = 1320 feet



Stream Classes

- Class 1 Streams
- Class 2 Streams
- Class 3 Streams

Roads

- Temp Spur
- Existing Road
- Proposed Road

Wetlands

- High Value Wetlands
- Other Wetlands
- 40' Contours
- Lakes
- Proposed Units
- Shoreline

4 inches = 1 mile



- Fish Passage Provided
- Fish Passage Failure
- Rock Pit
- Existing LTF

Road Data Card

Road Number: 8400301	ROD Road Number: 8400301	M.P.: 0.0	To M.P.: 0.4
Planned Length (miles): 0.4	Actual Length (miles):	New or Reconstruct:	new construction
Unit(s) Accessed: 45	Road Locator:		

ROAD MANAGEMENT OBJECTIVES

Functional Class: Local	Traffic Service Level: D	Highway Safety Act Number: NO
Design Vehicle: LT	Critical Vehicle: LT	Intended Purpose and Use: Silvicultural
Maintain Level: Active Sale 2 Post Sale 1	AFRPR STATUS: Closed	Closure Device: BARRIER
Management Strategy (Encourage, Accept, Discourage, Eliminate or Prohibit): Eliminate		Erosion Control:
Other Considerations:		

CULTURAL RESOURCES as planned: No Cultural Concerns JTA 2/5/98
as located: No Cultural Concerns JTA 2/5/98

ENGINEERING/ROADS

Recon/Location Narrative/Design Considerations (major drainages, road grades, future access, etc.): No significant areas of steep slopes, >67%, were crossed on this location.

Planned vs Implemented (describe changes and rational):

Rock Source(s) Location and Special Mitigation: No special concerns. Fits located as shown on map.

FISH HABITAT

No fisheries concerns have been identified during the planning phase. Mitigation may be necessary on some Class III streams after final road location is reviewed by District Biologist.

Stream Crossings As Planned (0 - Class I 0 - Class II 0 - Class III):

Stream Crossings As Located (Class I Class II Class III):

Cataloged Stream Crossings As Located:

GEOLOGY/KARST as planned: No concerns.
as located:

LANDS/MINERALS as planned: No concerns.
as located:

RECREATION/VISUALS as planned: No concerns.
as located:

SILVICULTURE as planned:
as located:

SOILS / WATERSHED as planned: Road is located to avoid area of forested wetlands to the west (BMPs 12.5, 14.2). Erosion control seeding of cutbanks and fillslopes should be completed as soon as possible following construction (BMPs 12.17, 14.8).
as located:

TIMBER/LOGGING SYSTEM/ADMINISTRATION as planned:No currently identified concerns - AMG 3/12/98
as located:

WILDLIFE as planned: No wildlife mitigation.
as located:

Ranger's Signature

Date

Road Data Card

Road Number: 8400301

Aerial Photo Year: 91

Line:




Map Number: KTN B4 NW

Photo Number: 1390-108




Scale: 1 inch = 1320 feet




Stream Classes

-  Class 1 Streams
-  Class 2 Streams
-  Class 3 Streams

Roads





-  Temp Spur
-  Existing Road
-  Proposed Road

Wetlands

-  High Value Wetlands
-  Other Wetlands
-  40' Contours
-  Lakes
-  Proposed Units
-  Shoreline

4 inches = 1 mile



-  Fish Passage Provided
-  Fish Passage Failure
-  Rock Pit
-  Existing LTF

Road Data Card

Road Number: 8400302	ROD Road Number: 8400302	M.P.: 0.0	To M.P.: 0.5
Planned Length (miles): 0.5	Actual Length (miles):	New or Reconstruct:	new construction t
Unit(s) Accessed: 45	Road Locator:		

ROAD MANAGEMENT OBJECTIVES

Functional Class: Local	Traffic Service Level: D	Highway Safety Act Number: NO
Design Vehicle: LT	Critical Vehicle: LT	Intended Purpose and Use: Silvicultural
Maintain Level: Active Sale 2 Post Sale 1	AFRPR STATUS: Closed	Closure Device: Barrier
Management Strategy (Encourage, Accept, Discourage, Eliminate or Prohibit): Eliminate	Erosion Control:	
Other Considerations:		

CULTURAL RESOURCES as planned: as located:

ENGINEERING/ROADS

Recon/Location Narrative/Design Considerations (major drainages, road grades, future access, etc.): No significant areas of steep slopes, >67%, were crossed on this location.

Planned vs Implemented (describe changes and rational):

Rock Source(s) Location and Special Mitigation: No special concerns. Pile located as shown on map.

FISH HABITAT

No fisheries concerns have been identified during the planning phase. Additional reconnaissance is required after final road location is completed.

Stream Crossings As Planned (0 - Class I 0 - Class II 0 - Class III):

Stream Crossings As Located (Class I Class II Class III):

Cataloged Stream Crossings As Located:

GEOLOGY/KARST as planned: No concerns.

as located:

LANDS/MINERALS as planned: No concerns.

as located:

RECREATION/VISUALS as planned: No concerns.

as located:

SILVICULTURE as planned:

as located:

SOILS / WATERSHED as planned: The 8400302 road has been located to avoid areas of wetlands (BMPs 12.5 and 14.2). Erosion control seeding of cutbanks and fillslopes should be completed as soon as possible following construction (BMPs 12.17, 14.8).

as located:

TIMBER/LOGGING SYSTEM/ADMINISTRATION as planned: No currently identified concerns - AMG 3/13/98

as located:

WILDLIFE as planned: No wildlife mitigation.

as located:

Ranger's Signature

Date

Road Data Card

Road Number: 8400302

Aerial Photo Year: 91

Line:

Map Number: KTN B4 NW

Photo Number: 1390-108

Scale: 1 inch = 1320 feet



Stream Classes

- Class 1 Streams
- Class 2 Streams
- Class 3 Streams

Roads

- Temp Spur
- Existing Road
- Proposed Road

Wetlands

- High Value Wetlands
- Other Wetlands
- 40' Contours
- Lakes
- Proposed Units
- Shoreline

4 inches = 1 mile



- Fish Passage Provided
- Fish Passage Failure
- Rock Pit
- Existing LTF

Road Data Card

Road Number: 8400315	ROD Road Number:	M.P.: 0.0	To M.P.: 0.6
Planned Length (miles): 0.6	Actual Length (miles):	New or Reconstruct:	construction
Unit(s) Accessed: 41	Road Locator:		

ROAD MANAGEMENT OBJECTIVES

Functional Class: L	Traffic Service Level: D	Highway Safety Act Number: No
Design Vehicle: LT	Critical Vehicle: LT	Intended Purpose and Use: Silvicultural
Maintain Level: Active Sale 2	Post Sale 1	AFRPR STATUS: Closed
Management Strategy (Encourage, Accept, Discourage, Eliminate or Prohibit): Eliminate		Closure Device: Barrier
Other Considerations: Close road (Obliterate)		Erosion Control:

CULTURAL RESOURCES as planned: No Cultural Concerns JTA 2/5/98
as located: No Cultural Concerns JTA 2/5/98

ENGINEERING/ROADS

Recon/Location Narrative/Design Considerations (major drainages, road grades, future access, etc.): No significant areas of steep slopes, >67%, were crossed on this location.

Planned vs Implemented (describe changes and rational):

Rock Source(s) Location and Special Mitigation: No special concerns. Pits located as shown on map.

FISH HABITAT

No fisheries concerns identified during the planning phase.

Stream Crossings As Planned (0 - Class I 0 - Class II 0- Class III):

Stream Crossings As Located (Class I Class II Class III):

Cataloged Stream Crossings As Located:

GEOLOGY/KARST as planned: No concerns.

as located:

LANDS/MINERALS as planned: No concerns.

as located:

RECREATION/VISUALS as planned:

as located:

SILVICULTURE as planned: No concerns. CT 3/11/98

as located:

SOILS / WATERSHED as planned:

Roads have been located to avoid wetland areas (BMP 14.2) to the extent possible. The lower end of this road segment is located on an area of low value wetlands. Use overlay road construction with minimal side ditching on these wetlands to minimize the disruption of groundwater flow (BMPs 12.5 and 14.3). Avoid using these wetlands as disposal sites for waste material and logging slash (BMP 14.19). Erosion control seeding of cutbanks and fillslopes should be implemented as soon as possible (BMPs 12.17, 14.8).

as located:

TIMBER/LOGGING SYSTEM/ADMINISTRATION as planned: No currently identified concerns AMG 3/11/98

as located:

WILDLIFE as planned: No wildlife mitigation.

as located:

Ranger's Signature

Date

Road Data Card

Road Number: 8400315

Map Number: KTN B4 NW

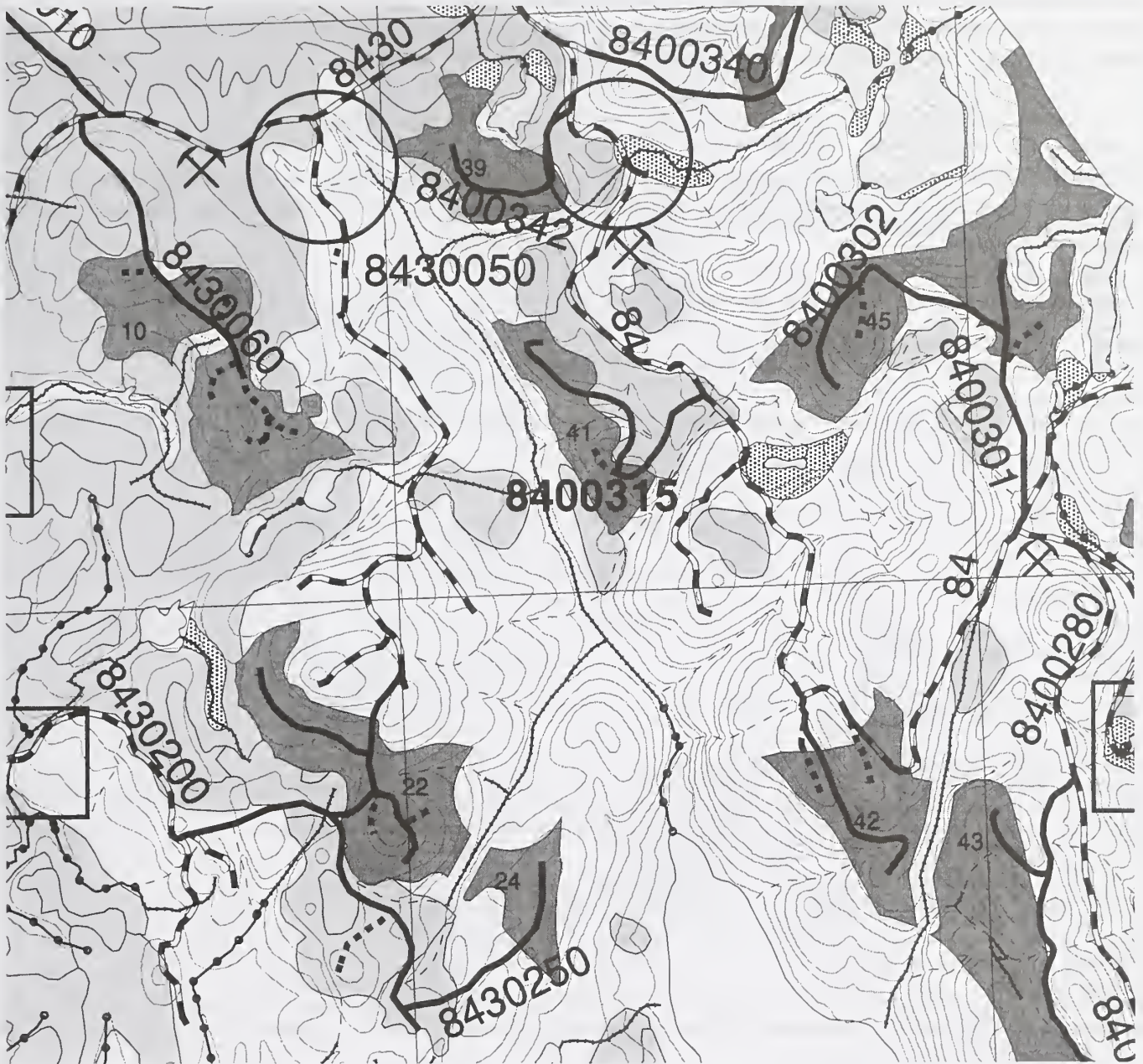
Scale: 1 inch = 1320 feet

Aerial Photo

Year: 91

Line:

Photo Number: 1390-108



Stream Classes

- Class 1 Streams
- Class 2 Streams
- Class 3 Streams

Roads

- Temp Spur
- Existing Road
- Proposed Road

Wetlands

- High Value Wetlands
- Other Wetlands
- 40' Contours
- Lakes
- Proposed Units
- Shoreline

4 inches = 1 mile



- Fish Passage Provided
- Fish Passage Failure
- Rock Pit
- Existing LTF

Road Data Card

Road Number: 8400340	ROD Road Number: 8400340	M.P.: 0.0	To M.P.: 0.8
Planned Length (miles): 0.8	Actual Length (miles):	New or Reconstruct:	new construction
Unit(s) Accessed: 40	Road Locator:		

ROAD MANAGEMENT OBJECTIVES

Functional Class: Local	Traffic Service Level: D	Highway Safety Act Number: NO
Design Vehicle: LT	Critical Vehicle: LT	Intended Purpose and Use: Silvicultural
Maintain Level: Active Sale 2 Post Sale 1	AFRPR STATUS: Closed	Closure Device: barrier
Management Strategy (Encourage, Accept, Discourage, Eliminate or Prohibit): Eliminate		Erosion Control: waterbar
Other Considerations:		

CULTURAL RESOURCES as planned: No Cultural Concerns JTA 2/5/98

as located: No Cultural Concerns JTA 2/5/98

ENGINEERING/ROADS

Recon/Location Narrative/Design Considerations (major drainages, road grades, future access, etc.): No significant areas of steep slopes, >67%, were crossed on this location.

Planned vs Implemented (describe changes and rationale):

Rock Source(s) Location and Special Mitigation: No special concerns. Pits located as shown on map.

FISH HABITAT

Three water quality streamcrossings have been identified during the planning phase for this road. Passage requirements may be required on some Class II streams after road location is reviewed by District Biologist (BMP 14.17).

Stream Crossings As Planned (0 - Class I 0 - Class II 3 - Class III):

Stream Crossings As Located (Class I Class II Class III):

Cataloged Stream Crossings As Located:

GEOLOGY/KARST as planned: No concerns.

as located:

LANDS/MINERALS as planned: No concerns.

as located:

RECREATION/VISUALS as planned: No concerns.

as located:

SILVICULTURE as planned: No concerns. CT 3/11/98

as located:

SOILS / WATERSHED as planned:

The eastern part of the 8400340 road is located on low value forested wetlands (BMPs 12.5 and 14.2). Use overlay road construction on wetlands and minimize side ditching, where practicable, to minimize the effects upon groundwater flow (BMP 14.3). Provide cross drains where needed to provide for the passage of surface water and aquatic organisms (BMP 12.5). Erosion control seeding of cutbanks and fillslopes should be implemented as soon as possible (BMPs 12.17 and 14.8) following construction.

as located:

TIMBER/LOGGING SYSTEM/ADMINISTRATION as planned:No currently identified concerns AMG 3/11/98

as located:

WILDLIFE as planned: No wildlife mitigation.

as located:

Ranger's Signature

Date

Road Data Card

Road Number: 8400342	ROD Road Number: 8400342	M.P.: 0.0	To M.P.: 0.4
Planned Length (miles): 0.4	Actual Length (miles):	New or Reconstruct:	new const
Unit(s) Accessed: 39	Road Locator:		

ROAD MANAGEMENT OBJECTIVES

Functional Class: L	Traffic Service Level: D	Highway Safety Act Number:
Design Vehicle: LT	Critical Vehicle: LT	Intended Purpose and Use: Silvicultural
Maintain Level: Active Sale 2	Post Sale 1	AFRPR STATUS: close
Management Strategy (Encourage, Accept, Discourage, Eliminate or Prohibit): Eliminate		Closure Device: Barrier
Other Considerations:		Erosion Control: water bar

CULTURAL RESOURCES as planned:
as located:

ENGINEERING/ROADS

Recon/Location Narrative/Design Considerations (major drainages, road grades, future access, etc.): No significant areas of steep slopes, >67%, were crossed on this location.

Planned vs Implemented (describe changes and rationale):

Rock Source(s) Location and Special Mitigation: No special concerns. Pits located as shown on map.

FISH HABITAT

No fisheries concerns have been identified during the planning phase. Additional reconnaissance is required after final road location is completed.

Stream Crossings As Planned (0 - Class I 0 - Class II 0 - Class III):

Stream Crossings As Located (Class I Class II Class III):

Cataloged Stream Crossings As Located:

GEOLOGY/KARST as planned: Area is underlain by volcanic ash and cinder. See Soils/Watershed for mitigation measures.
as located:

LANDS/MINERALS as planned: No concerns.
as located:

RECREATION/VISUALS as planned: No concerns.
as located:

SILVICULTURE as planned: No concerns. CT 3/11/98
as located:

SOILS / WATERSHED as planned:

The east and west ends of the 8340800 road are located on low value forested wetlands (BMPs 12.5 and 14.2). Use overlay road construction on wetlands and minimize side ditching, where practicable, to minimize the effects upon groundwater flow (BMP 14.3). Provide cross drains where needed to provide for the passage of surface water and aquatic organisms (BMP 12.5). Soils consist of erodible volcanic ash and cinders. Minimize road cuts and other operations which expose soil material. Erosion control seeding of cutbanks and fillslopes should be implemented as soon as possible (BMPs 12.17 and 14.8) following construction.

as located:

TIMBER/LOGGING SYSTEM/ADMINISTRATION as planned:No currently identified concerns AMG 3/11/98
as located:

WILDLIFE as planned: No wildlife mitigation.
as located:

Ranger's Signature

Date

Road Data Card

Road Number: 8400342

Aerial Photo Year: 91

Line:

Map Number: KTN B4 NW

Photo Number: 1390-108

Scale: 1 inch = 1320 feet









Stream Classes

-

Roads





-
- Temp Spur
Existing Road
Proposed Road

Wetlands

-
-  High Value Wetlands
 Other Wetlands
 40' Contours
 Lakes
 Proposed Units
 Shoreline

4 inches = 1 mile



-  Fish Passage Provided
 Fish Passage Failure
 Rock Pit
 Existing LTF

Road Data Card

Road Number: 8400420	ROD Road Number: 8400420	M.P. : 0.0	To M.P. : 1.33
Planned Length (miles): 1.33	Actual Length (miles):	New or Reconstruct:	reconst
Unit(s) Accessed: Numerous	Road Locator:		

ROAD MANAGEMENT OBJECTIVES

Functional Class: Local	Traffic Service Level: D	Highway Safety Act Number: NO
Design Vehicle: LT	Critical Vehicle: LT	Intended Purpose and Use: Silvicultural
Maintain Level: Active Sale 2 Post Sale 2	AFRPR STATUS: Active	Closure Device: none
Management Strategy (Encourage, Accept, Discourage, Eliminate or Prohibit): Accept		Erosion Control:
Other Considerations:		

CULTURAL RESOURCES as planned: No Cultural Concerns JTA 2/5/98
as located: No Cultural Concerns JTA 2/5/98

ENGINEERING/ROADS

Recon/Location Narrative/Design Considerations (major drainages, road grades, future access, etc.):

Planned vs Implemented (describe changes and rational):

Rock Source(s) Location and Special Mitigation: No special concerns. Pits located as shown on map.

FISH HABITAT

No fisheries concerns were identified during the planning phase on this road. All existing drainage structures are functioning properly and meeting BMP's.

Stream Crossings As Planned (0 - Class I 0 - Class II 0 - Class III):

Stream Crossings As Located (Class I Class II Class III):

Cataloged Stream Crossings As Located:

GEOLOGY/KARST as planned: No concerns.

as located:

LANDS/MINERALS as planned: No concerns.

as located:

RECREATION/VISUALS as planned: No concerns.

as located:

SILVICULTURE as planned: No concerns. CT 3/11/98

as located:

SOILS / WATERSHED as planned: Erosion control seeding of cutbanks and fillslopes should be completed as soon as possible following reconstruction (BMPs 12.17, 14.8).

as located:

TIMBER/LOGGING SYSTEM/ADMINISTRATION as planned:No currently identified concerns AMG 3/11/98

as located:

WILDLIFE as planned: Road is within 0.5 miles of bald eagle nest. No blasting within 0.5 miles of eagle nest 3/1 -5/31. If nest is active, no blasting within 0.5 miles of nest 6/1 - 8/31.

as located:

Ranger's Signature

Date

Road Data Card

Road Number: 8400420

Aerial Photo Year: 91

Map Number: KTN B4 NW

Photo Number: 1390-82

Scale: 1 inch = 1320 feet







Line:

Shoal Cove LTF

Carroll Inlet





- Stream Classes**
-  Class 1 Streams
 -  Class 2 Streams
 -  Class 3 Streams
- Roads**
-  Temp Spur
 -  Existing Road
 -  Proposed Road

Wetlands

-  High Value Wetlands
-  Other Wetlands
-  40' Contours
-  Lakes
-  Proposed Units
-  Shoreline

4 inches = 1 mile



-  Fish Passage Provided
-  Fish Passage Failure
-  Rock Pit
-  Existing LTF

Road Data Card

Road Number: 8400425	ROD Road Number:	M.P.: 0.0	To M.P.: 0.7
Planned Length (miles): 0.7	Actual Length (miles):	New or Reconstruct:	new construction
Unit(s) Accessed: 1	Road Locator:		

ROAD MANAGEMENT OBJECTIVES

Functional Class: L	Traffic Service Level: D	Highway Safety Act Number:
Design Vehicle: LT	Critical Vehicle: LT	Intended Purpose and Use: Silvicultural
Maintain Level: Active Sale 2	Post Sale 1	AFRPR STATUS: Close
Management Strategy (Encourage, Accept, Discourage, Eliminate or Prohibit): Eliminate		Closure Device: barrier
Other Considerations: Close road (Obliterate)		Erosion Control: water bar

CULTURAL RESOURCES as planned:

as located:

ENGINEERING/ROADS

Recon/Location Narrative/Design Considerations (major drainages, road grades, future access, etc.): No significant areas of steep slopes, >67%, were crossed on this location.

Planned vs Implemented (describe changes and rational):

Rock Source(s) Location and Special Mitigation: No special concerns. Pits located as shown on map.

FISH HABITAT

No fisheries concerns identified during the planning phase. Additional reconnaissance is required after final road location is completed.

Stream Crossings As Planned (0 - Class I 0 - Class II 0 - Class III):

Stream Crossings As Located (Class I Class II Class III):

Cataloged Stream Crossings As Located:

GEOLOGY/KARST as planned: No concerns.

as located:

LANDS/MINERALS as planned: No concerns.

as located:

RECREATION/VISUALS as planned: Along portions of road visible from Thorne Arm: Where full bench cut, endhaul material where slopes are too steep to hold material. Mitigate effects of sidecast and landing area slash, within 30 feet of road shoulders, by endhauling slash to a nonimpacting area, cover with soil and shape to natural contours. WEA 2/23/98

as located:

SILVICULTURE as planned: No concerns. CT 3/11/98

as located:

SOILS / WATERSHED as planned: Area contains high landslide potential (MMI=3) soils (BMP 13.5). The 8400425 road has been located to avoid steep, potentially unstable slopes (BMPs 14.2 and 14.7). Low value forested wetlands and medium value short sedge meadow wetlands are located along the road corridor (BMP 12.5).. The Sphagnum peat bog near the junction with the 8400200 Road has been avoided (BMP 14.2). Road locations in these wetlands have been avoided to the extent possible (BMPs 12.5, 14.2). Use overlay road construction with minimal side ditching where practicable, to minimize the disruption of subsurface drainage (BMP 14.3). Erosion control seeding of cutbanks and fillslopes should be implemented as soon as possible (BMPs 12.17, 14.8) following construction..

as located:

TIMBER/LOGGING SYSTEM/ADMINISTRATION as planned: No currently identified concerns AMG 3/11/98

as located:

WILDLIFE as planned: Road is within 0.5 miles of bald eagle nest. No blasting within 0.5 miles of eagle nest 3/1 -5/31. If nest is active, no blasting within 0.5 miles of nest 6/1 - 8/31.

as located:

Ranger's Signature

Date

Road Data Card

Road Number: 8400425

Aerial Photo Year: 91

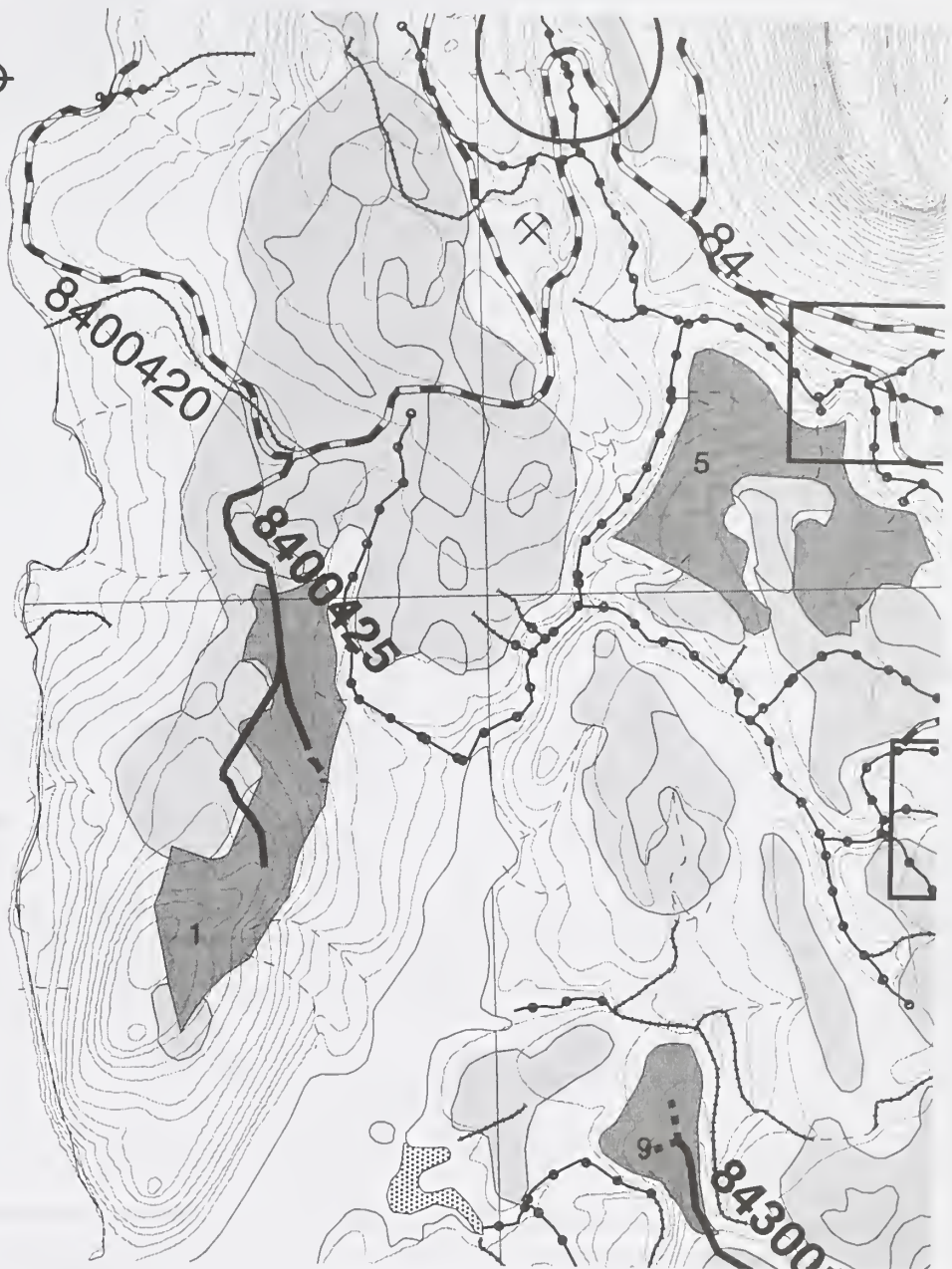
Line:

Map Number: KTN B4 NW

Photo Number: 1390-82

Scale: 1 inch = 1320 feet

Shoal
Cove
LTF



Stream Classes

- Class 1 Streams
- Class 2 Streams
- Class 3 Streams

Roads

- Temp Spur
- Existing Road
- Proposed Road

Wetlands

- High Value Wetlands
- Other Wetlands
- 40' Contours
- Lakes
- Proposed Units
- Shoreline

4 inches = 1 mile



- Fish Passage Provided
- Fish Passage Failure
- Rock Pit
- Existing LTF

Road Data Card

Road Number: 8400480	ROD Road Number: 8400480	M.P.: 0.0	To M.P.: 0.80
Planned Length (miles): 0.80	Actual Length (miles):	New or Reconstruct:	new construction
Unit(s) Accessed: 80	Road Locator:		

ROAD MANAGEMENT OBJECTIVES

Functional Class: Local	Traffic Service Level: D	Highway Safety Act Number: NO
Design Vehicle: LT	Critical Vehicle: LT	Intended Purpose and Use: Silvicultural
Maintain Level: Active Sale 2 Post Sale 1	AFRPR STATUS: Close	Closure Device: Barrier
Management Strategy (Encourage, Accept, Discourage, Eliminate or Prohibit): Eliminate		Erosion Control: water bar at MP 0.00
Other Considerations:		

CULTURAL RESOURCES as planned: No Cultural Concerns JTA 2/5/98
as located: No Cultural Concerns JTA 2/5/98

ENGINEERING/ROADS

Recon/Location Narrative/Design Considerations (major drainages, road grades, future access, etc.): No significant areas of steep slopes, >67%, were crossed on this location.

Planned vs Implemented (describe changes and rational):

Rock Source(s) Location and Special Mitigation: No special concerns. Pits located as shown on map.

FISH HABITAT

No fisheries concerns have been identified during the planning phase. Additional reconnaissance is required after final road location is completed.

Stream Crossings As Planned (0 - Class I 0 - Class II 0 - Class III):

Stream Crossings As Located (Class I Class II Class III):

Cataloged Stream Crossings As Located:

GEOLOGY/KARST as planned: No concerns.

as located:

LANDS/MINERALS as planned: No concerns.

as located:

RECREATION/VISUALS as planned: Along portions of road visible from Carroll Inlet. Where full bench cut, endhaul material where slopes are too steep to hold material. Mitigate effects of sidecast and landing area slash, within 30 feet of road shoulders, by endhauling slash to a nonimpacting area, cover with soil and shape to natural contours. WEA 2/23/98

as located:

SILVICULTURE as planned: No concerns. CT 3/11/98

as located:

SOILS / WATERSHED as planned: Forested wetland are located along this road corridor (BMP 12.5). Access roads have been located to avoid these wetland, to the extent possible (BMP 14.2). The north part of the 8400480 road is located in the medium value short sedge muskeg to avoid the AHMU Class I stream just to the west (BMPs 13.16, 14.2).. Use overlay road construction and minimize side ditching, where practicable on these wetlands, to minimize the effects upon groundwater flow (BMPs 12.5 and 14.3). Avoid the placement of fill material and sidecast of waste material into these wetlands (BMP 14.19).

Erosion control seeding of cutbanks and fillslopes should be implemented as soon as possible (BMPs 12.17, 14.8) following construction..

as located:

TIMBER/LOGGING SYSTEM/ADMINISTRATION as planned:No currently identified concerns AMG 3/11/98

as located:

WILDLIFE as planned: Road is within 0.5 miles of bald eagle nest. No blasting within 0.5 miles of eagle nest 3/1 -5/31. If nest is active, no blasting within 0.5 miles of nest 6/1 - 8/31.

as located:

Ranger's Signature

Date

Road Data Card

Road Number: 8430480

Aerial Photo

Year: 91

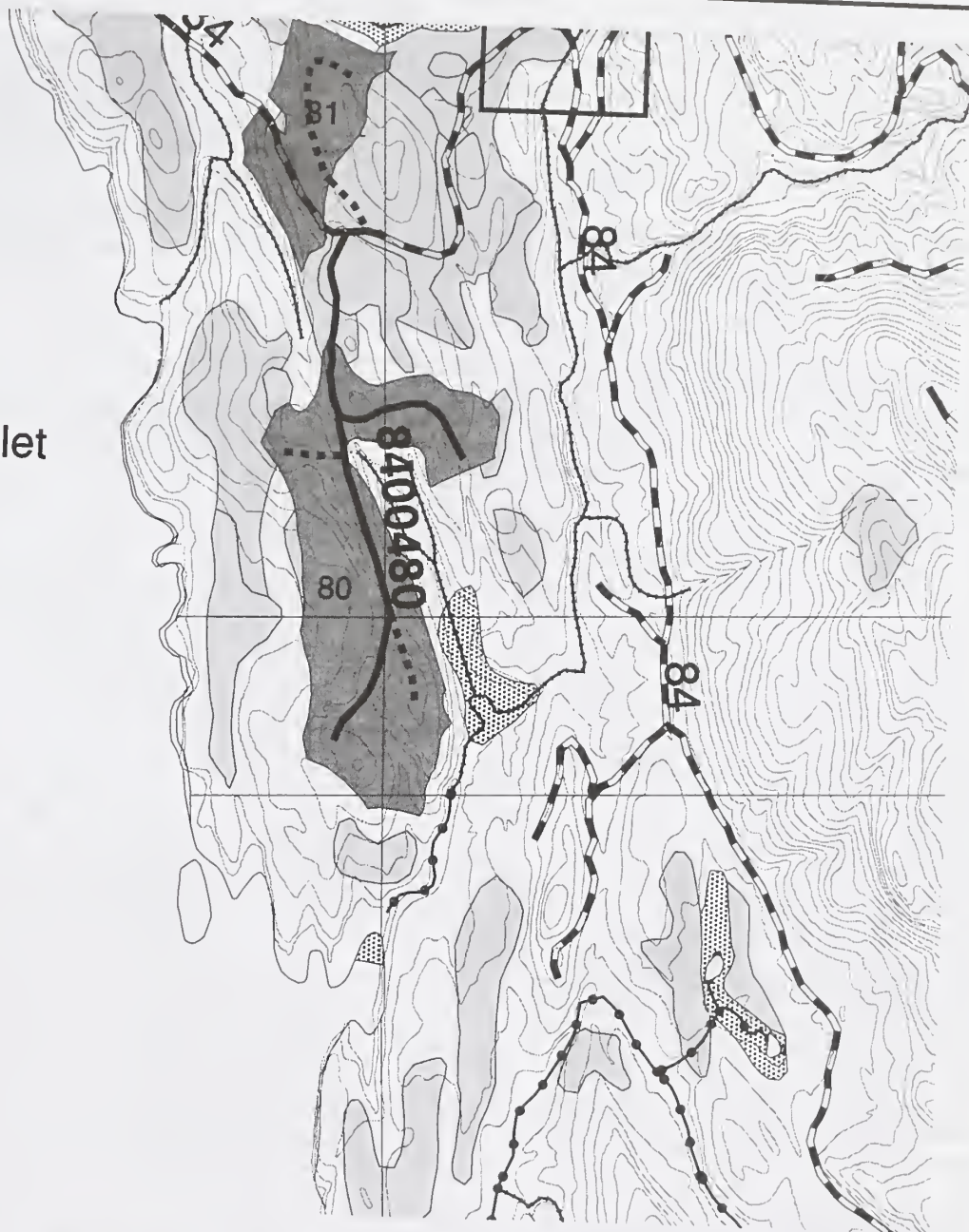
Line:

Map Number: KTN B4 NW




Photo Number: 1390-39

Scale: 1 inch = 1320 feet

Carroll Inlet









Stream Classes

-  Class 1 Streams
-  Class 2 Streams
-  Class 3 Streams

Roads





-  Temp Spur
-  Existing Road
-  Proposed Road

Wetlands

-  High Value Wetlands
-  Other Wetlands
-  40' Contours
-  Lakes
-  Proposed Units
-  Shoreline

4 inches = 1 mile



-  Fish Passage Provided
-  Fish Passage Failure
-  Rock Pit
-  Existing LTF

Road Data Card

Road Number: 8410000	ROD Road Number: 8410000	M.P.: 0.0	To M.P.: 0.70
Planned Length (miles): 0.70	Actual Length (miles):	New or Reconstruct:	reconstruction
Unit(s) Accessed: 141, 143	Road Locator:		

ROAD MANAGEMENT OBJECTIVES

Functional Class: Local	Traffic Service Level: D	Highway Safety Act Number: NO
Design Vehicle: LT	Critical Vehicle: LT	Intended Purpose and Use: Silvicultural
Maintain Level: Active Sale 2 Post Sale 1	AFRPR STATUS: Inactive	Closure Device: Barrier
Management Strategy (Encourage, Accept, Discourage, Eliminate or Prohibit): Eliminate		Erosion Control: waterbar
Other Considerations:		

CULTURAL RESOURCES as planned:
as located:

ENGINEERING/ROADS

Recon/Location Narrative/Design Considerations (major drainages, road grades, future access, etc.):

Planned vs Implemented (describe changes and rational):

Rock Source(s) Location and Special Mitigation: No special concerns. Pits located as shown on map.

FISH HABITAT

No fisheries concerns have been identified during the planning phase. An inspection of all culverts are scheduled in the spring of 1998 to ensure fish passage is provided on two Class II streams on this road (BMP 14.17 and 11.6).

Stream Crossings As Planned (0 - Class I 0 - Class II 0 - Class III):

Stream Crossings As Located (Class I Class II Class III):

Cataloged Stream Crossings As Located:

GEOLOGY/KARST as planned: North part of the 8410000 Road is located in areas of low vulnerability karst. Apply appropriate karst mitigation measures when necessary.

as located:

LANDS/MINERALS as planned: No concerns.

as located:

RECREATION/VISUALS as planned: No concerns.

as located:

SILVICULTURE as planned: No concerns. CT 3/11/98

as located:

SOILS / WATERSHED as planned: The north part of the 8410000 Road is located on low value forested and scrub-shrub muskeg wetlands (BMP 12.5). Road construction on these wetlands should use overlay design and minimize side ditching where possible (BMP 14.3).

as located:

TIMBER/LOGGING SYSTEM/ADMINISTRATION as planned:No currently identified concerns AMG 3/11/98

as located:

WILDLIFE as planned: Road is within 0.5 miles of bald eagle nest. No blasting within 0.5 miles of eagle nest 3/1 -5/31. If nest is active, no blasting within 0.5 miles of nest 6/1 - 8/31.

as located:

Ranger's Signature

Date

Road Data Card

Road Number: 8410000

Aerial Photo

Year: 91

Line:

Map Number: KTN B4 NW

Photo Number: 1390-135

Scale: 1 inch = 1320 feet



Stream Classes

- Class 1 Streams
- Class 2 Streams
- Class 3 Streams

Roads

- Temp Spur
- Existing Road
- Proposed Road

Wetlands

- High Value Wetlands
- Other Wetlands
- 40' Contours
- Lakes
- Proposed Units
- Shoreline

4 inches = 1 mile



- Fish Passage Provided
- Fish Passage Failure
- Rock Pit
- Existing LTF

Road Data Card

Road Number: 8420000
Planned Length (miles): 0.20
Unit(s) Accessed: 120

ROD Road Number: 8420000
Actual Length (miles):
Road Locator:

M.P.: 0.0 To M.P.: 0.20
New or Reconstruct: new construction

ROAD MANAGEMENT OBJECTIVES

Functional Class: Local Traffic Service Level: D Highway Safety Act Number: NO
Design Vehicle: LT Critical Vehicle: LT Intended Purpose and Use: Silvicultural
Maintain Level: Active Sale 2 Post Sale 1 AFRPR STATUS: Closed Closure Device: Barrier
Management Strategy (Encourage, Accept, Discourage, Eliminate or Prohibit): Eliminate Erosion Control: water bar
Other Considerations:

CULTURAL RESOURCES as planned: No Cultural concerns JTA 2/5/98
as located: No Cultural Concerns JTA 2/5/98

ENGINEERING/ROADS

Recon/Location Narrative/Design Considerations (major drainages, road grades, future access, etc.): No significant areas of steep slopes, >67%, were crossed on this location.

Planned vs Implemented (describe changes and rational):

Rock Source(s) Location and Special Mitigation: No special concerns. Pits located as shown on map.

FISH HABITAT

No fisheries concerns have been identified during the planning phase. Additional reconnaissance is required after final road location is completed. Class II road crossing will have cmp smaller than 1200mm diameter.

Stream Crossings As Planned (0 - Class I 0 - Class II 1 - Class III):

Stream Crossings As Located (Class I Class II Class III):

Cataloged Stream Crossings As Located:

GEOLOGY/KARST as planned: No concerns.
as located:

LANDS/MINERALS as planned: No concerns.
as located:

RECREATION/VISUALS as planned: Along portions of new road visible from Thorne Arm: (1) Where full bench cut, endhaul material where slopes are too steep to hold material. (2) Mitigate effects of sidecast and landing area slash, within 30 feet of road shoulders, by endhauling slash to a nonimpacting area, cover with soil and shape to natural contours. WEA 2/23/98
as located:

SILVICULTURE as planned: No concerns. CT 3/11/98
as located:

SOILS / WATERSHED as planned:

The 8420000 road is located on low value forested wetlands (BMP 12.5). Road construction on wetlands should use an overlay construction and minimize the amount of side ditching to reduce the effects upon groundwater flow and wetland moisture regimes (BMPs 12.5, 14.3). Avoid the use of wetlands for the disposal of waste material and logging slash (BMP 14.19). The eastern part of this road segment is located near high landslide potential (MMI=3) soils (BMP 13.5). The 8420000 road has been planned to avoid high landslide potential areas (BMP 14.2). Erosion control seeding of cutbanks and fillslopes should be implemented as soon as possible (BMPs 12.17 and 14.8) following construction.

as located:

TIMBER/LOGGING SYSTEM/ADMINISTRATION as planned: No currently identified concerns AMG 3/11/98
as located:

WILDLIFE as planned: Road is within 0.5 miles of bald eagle nest. No blasting within 0.5 miles of eagle nest 3/1 -5/31. If nest is active, no blasting within 0.5 miles of nest 6/1 - 8/31.
as located:

Ranger's Signature

Date

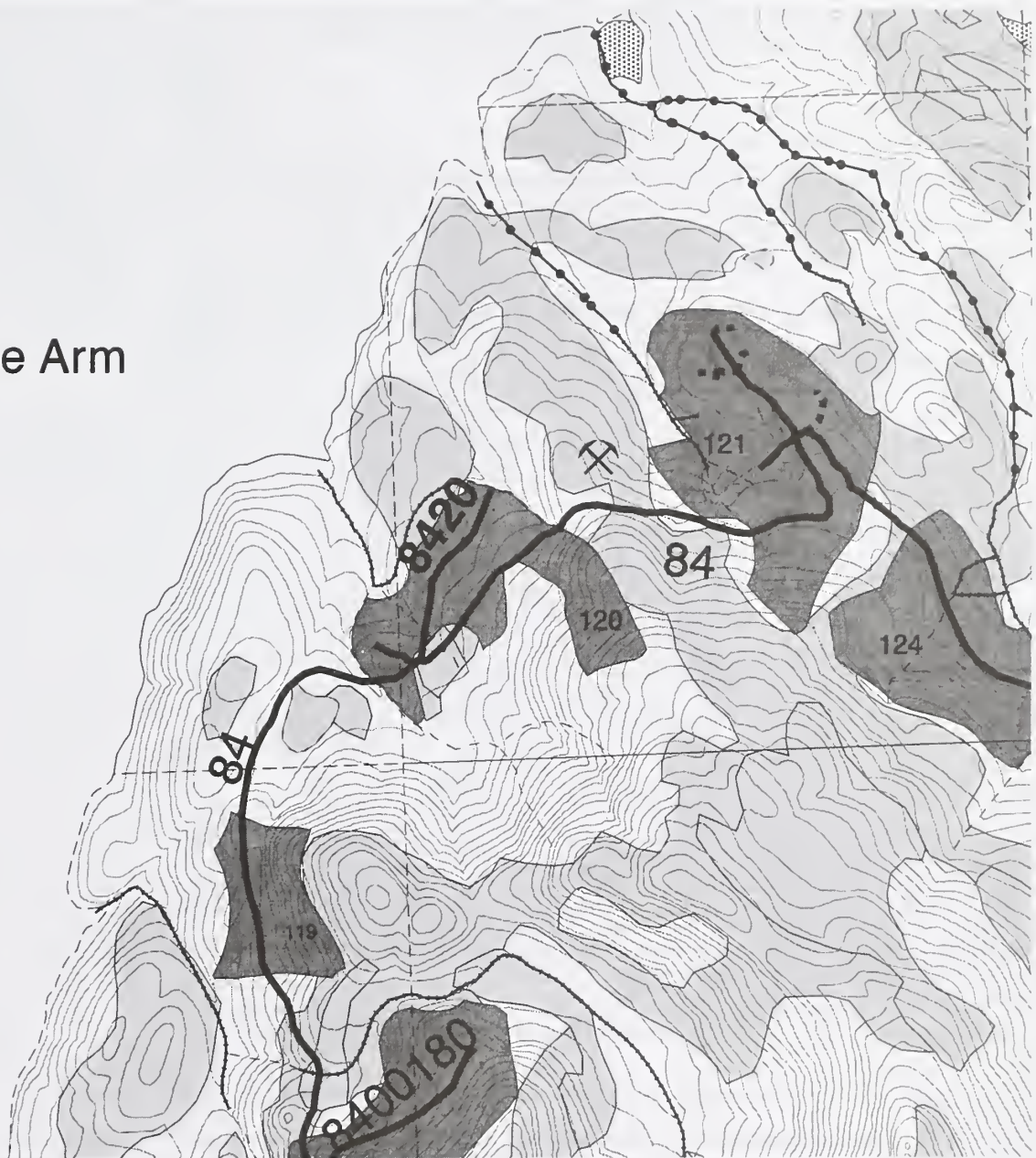
Road Data Card

Road Number: 8420000
Aerial Photo Year 91

Map Number: KTN B4 SE
Line: Photo Number: 1390-140

Scale: 1 inch = 1320 feet

Thorne Arm



Stream Classes

- Class 1 Streams
- Class 2 Streams
- Class 3 Streams

Roads

- Temp Spur
- Existing Road
- Proposed Road

Wetlands

- High Value Wetlands
- Other Wetlands
- 40' Contours
- Lakes
- Proposed Units
- Shoreline

4 inches = 1 mile



- Fish Passage Provided
- Fish Passage Failure
- Rock Pit
- Existing LTF

Road Data Card - 8422000 New Construction

Road Number: 8422000	ROD Road Number: 8422000	M.P.: 0.0	To M.P.: 4.50
Planned Length (miles): 4.50	Actual Length (miles):	New or Reconstruct:	new construction
Unit(s) Accessed: 133,134,136,139,140	Road Locator:		

ROAD MANAGEMENT OBJECTIVES

Functional Class: Local	Traffic Service Level: D	Highway Safety Act Number: NO
Design Vehicle: LT	Critical Vehicle: LT	Intended Purpose and Use: Silvicultural
Maintain Level: Active Sale 2 Post Sale 1		Closure Device:
Management Strategy (Encourage, Accept, Discourage, Eliminate or Prohibit): Prohibit		Erosion Control: water bar
Other Considerations:		

CULTURAL RESOURCES as planned:
as located:

ENGINEERING/ROADS

Recon/Location Narrative/Design Considerations (major drainages, road grades, future access, etc.): No significant areas of steep slopes, >67%, were crossed on this location.

Planned vs Implemented (describe changes and rational):

Rock Source(s) Location and Special Mitigation: No special concerns. Pits located as shown on map.

FISH HABITAT

Fish passage and timing is required on all Class II stream crossings (BMP 14.6 and 14.17). Stream surveys have verified the presence of anadromous fish downstream. All instream road construction will be permitted between July 18 -August 7th. Timing restrictions may be required for some Class III streams after final road location is reviewed by District Biologist (BMP 14.6). Recommend developing a erosion control plan for all Class I and II streams to help minimize sedimentation (BMP 14.5).

Stream Crossings As Planned (1 -Class I 3 - Class II 1- Class III):

Stream Crossings As Located (Class I Class II Class III):

Cataloged Stream Crossings As Located:

GEOLOGY/KARST as planned: No concerns.
as located:

LANDS/MINERALS as planned: No concerns.
as located:

RECREATION/VISUALS as planned: No concerns.
as located:

SILVICULTURE as planned: No concerns. CT 3/11/98
as located:

SOILS / WATERSHED as planned:

The 8422000 road is located entirely on low value forested wetlands and scrub-shrub muskeg and medium value short sedge meadow wetlands (BMPs 12.5 and 14.2). There are no practicable alternative road locations to access this area (BMP 14.2) that would avoid wetlands. Use overlay road construction on wetlands and minimize side ditching, where practicable, to minimize the effects upon groundwater flow (BMP 14.3). Provide cross drains where needed to provide for the passage of surface water and aquatic organisms (BMP 12.5). Erosion control seeding of cutbanks and fillslopes should be implemented as soon as possible (BMPs 12.17 and 14.8) following construction..

as located:

TIMBER/LOGGING SYSTEM/ADMINISTRATION as planned:No currently identified concerns AMG 3/11/98
as located:

WILDLIFE as planned: No wildlife mitigation. Avoid sensitive plant (*Platanthera chorisiana*) located at the south edge of unit 126.
as located:

Ranger's Signature

Date

Road Data Card - 8422000 New Construction

Road Number: 8422000
Aerial Photo Year: 91

Line:

Map Number: KTN B4 SE
Photo Number: 1390-160

Scale: 2 inch = 1 mile



Stream Classes

- Class 1 Streams
- Class 2 Streams
- Class 3 Streams

Roads

- Temp Spur
- Existing Road
- Proposed Road

Wetlands

- High Value Wetlands
- Other Wetlands
- 40' Contours
- Lakes
- Proposed Units
- Shoreline

2 inches = 1 mile



- Fish Passage Provided
- Fish Passage Failure
- Rock Pit
- Existing LTF

Road Data Card

Road Number: 8422100	ROD Road Number: 8422100	M.P.: 0.0	To M.P.: 0.50
Planned Length (miles): 0.50	Actual Length (miles):	New or Reconstruct:	new construction
Unit(s) Accessed: 126, 246	Road Locator:		

ROAD MANAGEMENT OBJECTIVES

Functional Class: Local	Traffic Service Level: D	Highway Safety Act Number: NO
Design Vehicle: LT	Critical Vehicle: LT	Intended Purpose and Use: Silvicultural
Maintain Level: Active Sale 2 Post Sale 1	AFRPR STATUS: Close	Closure Device: Barrier
Management Strategy (Encourage, Accept, Discourage, Eliminate or Prohibit): Eliminate		Erosion Control: waterbar
Other Considerations:		

CULTURAL RESOURCES as planned: No Cultural Concerns JTA 2/5/98
as located: No Cultural Concerns 2/5/98

ENGINEERING/ROADS

Recon/Location Narrative/Design Considerations (major drainages, road grades, future access, etc.): No significant areas of steep slopes, >67%, were crossed on this location. Investigate accessing unit from the northern part in the final location in order to avoid more wetlands.

Planned vs Implemented (describe changes and rationale): Rock Source(s) Location and Special Mitigation: No concerns. Pits located as shown on map.

FISH HABITAT

Fish passage is required on one Class II stream located on this road (BMP 14.17). Additional reconnaissance is required after final road location is completed.

Stream Crossings As Planned (0 -Class I 1 - Class II 0- Class III):

Stream Crossings As Located (Class I Class II Class III):

Cataloged Stream Crossings As Located:

GEOLOGY/KARST as planned: No concerns.
as located:

LANDS/MINERALS as planned: No concerns.
as located:

RECREATION/VISUALS as planned: No concerns.
as located:

SILVICULTURE as planned: No concerns. CT 3/11/98
as located:

SOILS / WATERSHED as planned:

The 8422100 road is located mostly on low value forested wetlands and scrub-shrub muskeg wetlands (BMPs 12.5 and 14.2). An alternative road location to access this area (BMP 14.2) that would avoid wetlands to a greater degree is in the northern part of Harvest Unit 126. Use overlay road construction on wetlands and minimize side ditching, where practicable, to minimize the effects upon groundwater flow (BMP 14.3). Provide cross drains where needed to provide for the passage of surface water and aquatic organisms (BMP 12.5). Erosion control seeding of cutbanks and fillslopes should be implemented as soon as possible (BMPs 12.17 and 14.8) following construction.

as located:

TIMBER/LOGGING SYSTEM/ADMINISTRATION as planned: No currently identified concerns AMG 3/11/98
as located:

WILDLIFE as planned: No wildlife mitigation.
as located:

Ranger's Signature

Date

Road Data Card

Road Number: 8422100

Aerial Photo Year: 91

Line:

Map Number: KTN B4 SE

Photo Number: 1390-160

Scale: 1 inch = 1320 feet



Stream Classes

- Class 1 Streams
- Class 2 Streams
- Class 3 Streams

Roads

- Temp Spur
- Existing Road
- Proposed Road

Wetlands

- High Value Wetlands
- Other Wetlands
- 40' Contours
- Lakes
- Proposed Units
- Shoreline

4 inches = 1 mile



- Fish Passage Provided
- Fish Passage Failure
- Rock Pit
- Existing LTF

Road Data Card

Road Number: 8422200
Planned Length (miles): 1.00
Unit(s) Accessed: 135

ROD Road Number: 8422200
Actual Length (miles):
Road Locator:

M.P.: 0.0 To M.P.: 1.00
New or Reconstruct: new construction

ROAD MANAGEMENT OBJECTIVES

Functional Class: Local Traffic Service Level: D Highway Safety Act Number: NO
Design Vehicle: LT Critical Vehicle: LT Intended Purpose and Use: Silvicultural
Maintain Level: Active Sale 2 Post Sale 1 AFRPR STATUS: Closed Closure Device: Barrier
Management Strategy (Encourage, Accept, Discourage, Eliminate or Prohibit): Eliminate Erosion Control: water bar
Other Considerations:

CULTURAL RESOURCES as planned:
as located:

ENGINEERING/ROADS

Recon/Location Narrative/Design Considerations (major drainages, road grades, future access, etc.): No significant areas of steep slopes, >67%, were crossed on this location.

Planned vs Implemented (describe changes and rationale):

Rock Source(s) Location and Special Mitigation: No special concerns. Pits located as shown on map.

FISH HABITAT

No fisheries concerns have been identified during the planning phase. Timing restrictions may apply on some additional Class III streamcourses after final road location is reviewed by District Biologist (BMP 14.6).

Stream Crossings As Planned (0 - Class I 0 - Class II 0 - Class III):

Stream Crossings As Located (Class I Class II Class III):

Cataloged Stream Crossings As Located:

GEOLOGY/KARST as planned: No concerns.
as located:

LANDS/MINERALS as planned: No concerns.
as located:

RECREATION/VISUALS as planned: No concerns.
as located:

SILVICULTURE as planned: No concerns. CT 3/11/98
as located:

SOILS / WATERSHED as planned:

The 8422200 road is located entirely on low value forested wetlands and scrub-shrub muskeg and medium value short sedge meadow wetlands (BMPs 12.5 and 14.2). There are no practicable alternative road locations to access this area (BMP 14.2) that would avoid wetlands. Use overlay road construction on wetlands and minimize side ditching, where practicable, to minimize the effects upon groundwater flow (BMP 14.3). Provide cross drains where needed to provide for the passage of surface water and aquatic organisms (BMP 12.5). Erosion control seeding of cutbanks and fillslopes should be implemented as soon as possible (BMPs 12.17 and 14.8) following construction.

as located:

TIMBER/LOGGING SYSTEM/ADMINISTRATION as planned:No currently identified concerns AMG 3/11/98
as located:

WILDLIFE as planned: No wildlife mitigation. Avoid sensitive plants (*Platanthera choristana*) in unit 134.
as located:

Ranger's Signature

Date

Road Data Card

Road Number: 8422200

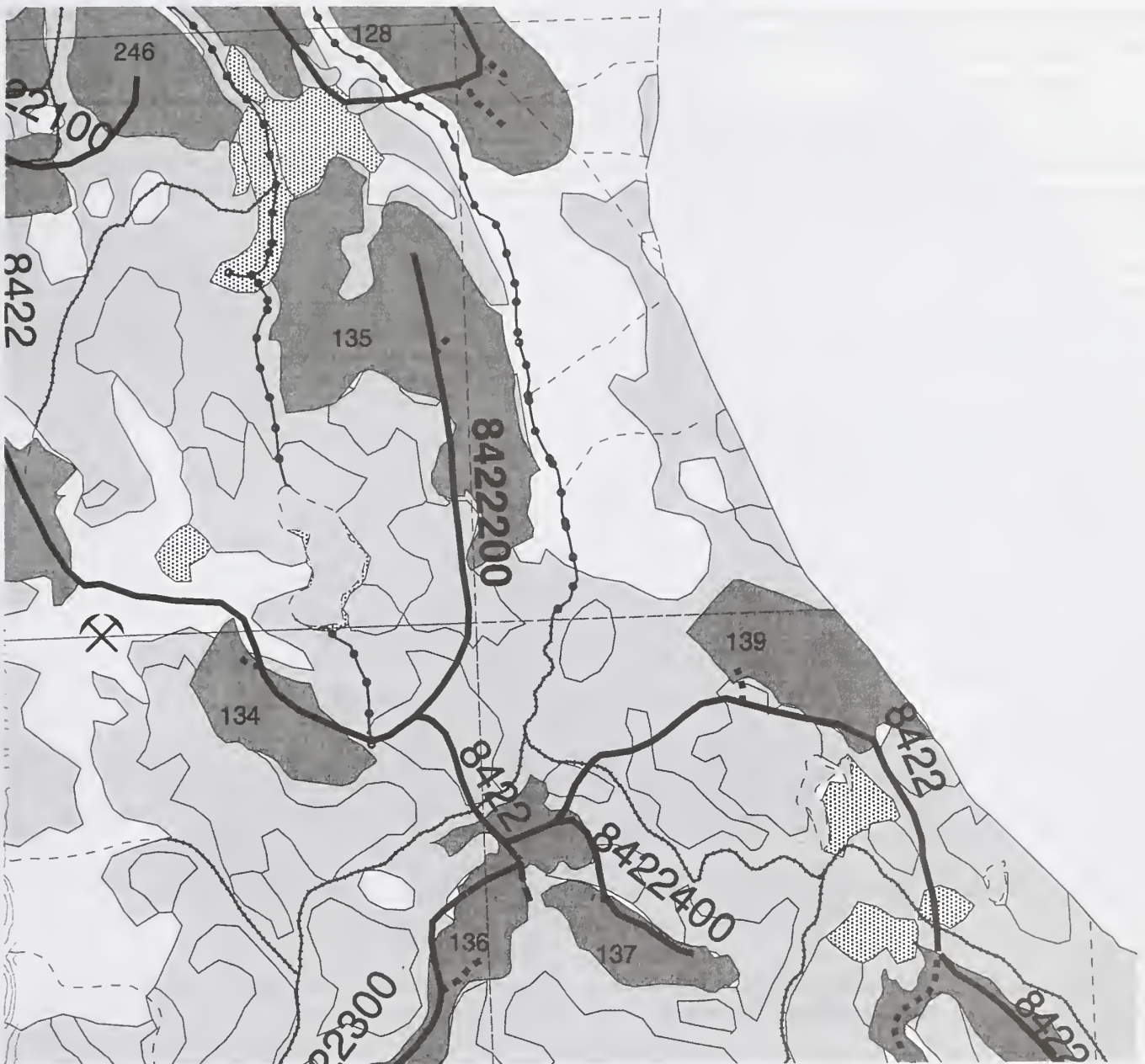
Aerial Photo Year: 91

Line:



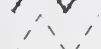
Map Number: KTN B4 SE

Scale: 1 inch = 1320 feet

Photo: 1390-160



Stream Classes

-  Class 1 Streams
-  Class 2 Streams
-  Class 3 Streams

Roads





-  Temp Spur
-  Existing Road
-  Proposed Road

Wetlands

-  High Value Wetlands
-  Other Wetlands
-  40' Contours
-  Lakes
-  Proposed Units
-  Shoreline

4 inches = 1 mile



-  Fish Passage Provided
-  Fish Passage Failure
-  Rock Pit
-  Existing LTF

Road Data Card

Road Number: 8422300	ROD Road Number: 8422300	M.P.: 0.0
Planned Length (miles): 0.70	Actual Length (miles):	To M.P.: 0.70
Unit(s) Accessed: 136, 138	Road Locator:	New or Reconstruct: new construction

ROAD MANAGEMENT OBJECTIVES

Functional Class: Local	Traffic Service Level: D	Highway Safety Act Number: NO
Design Vehicle: LT	Critical Vehicle: LT	Intended Purpose and Use: Silvicultural
Maintain Level: Active Sale 2 Post Sale 1	AFRPR STATUS: Close	Closure Device: Barrier
Management Strategy (Encourage, Accept, Discourage, Eliminate or Prohibit): Eliminate		Erosion Control: waterbar
Other Considerations:		

CULTURAL RESOURCES as planned: No Cultural Concerns JTA 2/5/98
as located: No Cultural Concerns JTA 2/5/98

ENGINEERING/ROADS

Recon/Location Narrative/Design Considerations (major drainages, road grades, future access, etc.): No significant areas of steep slopes, >67%, were crossed on this location.

Planned vs Implemented (describe changes and rational):

Rock Source(s) Location and Special Mitigation: No special concerns. Pits located as shown on map.

FISH HABITAT

No fisheries concerns have been identified during the planning phase. Additional reconnaissance after final road location is reviewed by District Biologist.

Stream Crossings As Planned (0 -Class I 0 -Class II 0 -Class III):

Stream Crossings As Located (Class I Class II Class III):

Cataloged Stream Crossings As Located:

GEOLOGY/KARST as planned: No concerns.

as located:

LANDS/MINERALS as planned: No concerns.

as located:

RECREATION/VISUALS as planned: No concerns.

as located:

SILVICULTURE as planned: No concerns. CT 3/11/98

as located:

SOILS / WATERSHED as planned:

The 8422300 road is located mainly on low value forested wetlands (BMPs 12.5 and 14.2). There are no practicable alternative road locations to access this area (BMP 14.2) that would avoid wetlands. Use overlay road construction on wetlands and minimize side ditching, where practicable, to minimize the effects upon groundwater flow (BMP 14.3). Provide cross drains where needed to provide for the passage of surface water and aquatic organisms (BMP 12.5). The access road has been located in the lower part of the unit to avoid high landslide potential sites (BMPs 14.1 and 14.2). Erosion control seeding of cutbanks and fillslopes should be implemented as soon as possible (BMPs 12.17 and 14.8) following construction..

as located:

TIMBER/LOGGING SYSTEM/ADMINISTRATION as planned:No currently identified concerns AMG 3/11/98

as located:

WILDLIFE as planned: No wildlife mitigation.

as located:

Ranger's Signature

Date

Road Data Card

Road Number: 8422300

Aerial Photo

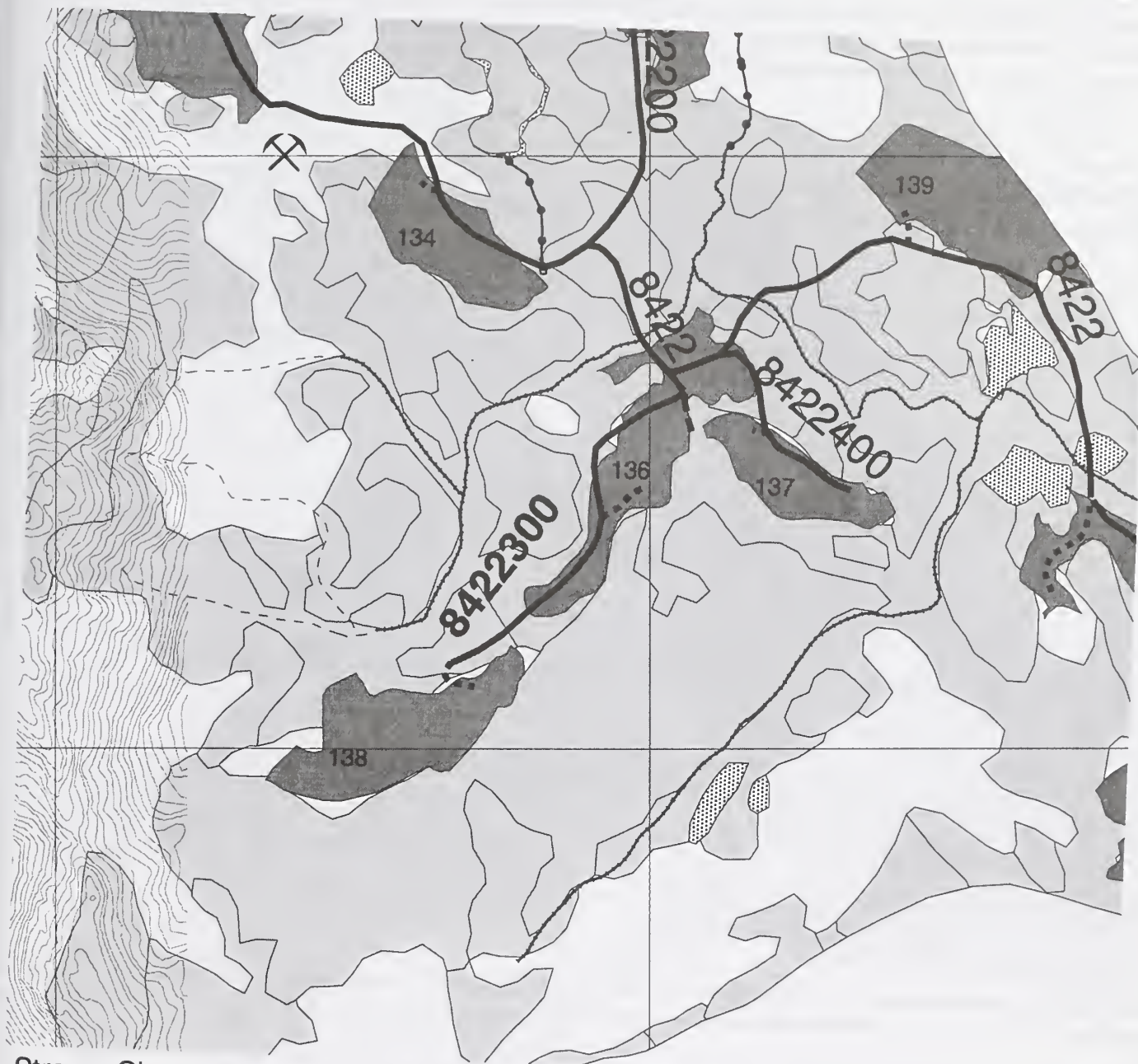
Year: 91

Line:

Map Number: KTN B4 SW

Photo Number: 1390-162

Scale: 1 inch = 4 milest



Stream Classes

- Class 1 Streams
- Class 2 Streams
- Class 3 Streams

Roads

- Temp Spur
- Existing Road
- Proposed Road

Wetlands

- High Value Wetlands
- Other Wetlands
- 40' Contours
- Lakes
- Proposed Units
- Shoreline

4 inches = 1 mile



- Fish Passage Provided
- Fish Passage Failure
- Rock Pit
- Existing LTF

Road Data Card

Road Number: 8422400	ROD Road Number: 84224000	M.P.: 0.0	To M.P.: 0.70
Planned Length (miles): 0.70	Actual Length (miles):	New or Reconstruct:	new construction
Unit(s) Accessed: 137	Road Locator:		

ROAD MANAGEMENT OBJECTIVES

Functional Class: Local	Traffic Service Level: D	Highway Safety Act Number: NO
Design Vehicle: LT	Critical Vehicle: LT	Intended Purpose and Use: Silvicultural
Maintain Level: Active Sale 2 Post Sale 1	AFRPR STATUS: Close	Closure Device: Barrier
Management Strategy (Encourage, Accept, Discourage, Eliminate or Prohibit): Eliminate		Erosion Control: waterbar
Other Considerations:		

CULTURAL RESOURCES as planned: as located:

ENGINEERING/ROADS

Recon/Location Narrative/Design Considerations (major drainages, road grades, future access, etc.): No significant areas of steep slopes, >67%, were crossed on this location.

Planned vs Implemented (describe changes and rationale):

Rock Source(s) Location and Special Mitigation: No special concerns. Pits located as shown on map.

FISH HABITAT

No fisheries concerns have been identified during the planning phase.

Stream Crossings As Planned (0 -Class I 0 -Class II 0 -Class III):

Stream Crossings As Located (Class I Class II Class III):

Cataloged Stream Crossings As Located:

GEOLOGY/KARST as planned: No concerns. as located:

LANDS/MINERALS as planned: No concerns. as located:

RECREATION/VISUALS as planned: No concerns. as located:

SILVICULTURE as planned: No concerns. CT 3/11/98 as located:

SOILS / WATERSHED as planned:

The north end of the 8422400 road is located on low value forested wetlands and scrub-shrub muskeg. The southern section of the road is located on non-wetlands (BMPs 12.5 and 14.2). There are no practicable alternative road locations to access this area (BMP 14.2) that would avoid wetlands. Use overlay road construction on wetlands and minimize side ditching, where practicable, to minimize the effects upon groundwater flow (BMP 14.3). Provide cross drains where needed to provide for the passage of surface water and aquatic organisms (BMP 12.5). Erosion control seeding of cutbanks and fillslopes should be implemented as soon as possible (BMPs 12.17 and 14.8) following construction..

as located:

TIMBER/LOGGING SYSTEM/ADMINISTRATION as planned: No currently identified concerns AMG 3/11/98 as located:

WILDLIFE as planned: No wildlife mitigation. as located:

Ranger's Signature

Date

Road Data Card

Road Number: 8422400

Aerial Photo Year: 91

Map Number: KTN B4 SW

Line:

Photo Number: 1390-160

Scale: 1 inch = 1320 feet



Stream Classes

- Class 1 Streams
- Class 2 Streams
- Class 3 Streams

Roads

- Temp Spur
- Existing Road
- Proposed Road

Wetlands

- High Value Wetlands
- Other Wetlands
- 40' Contours
- Lakes
- Proposed Units
- Shoreline

4 inches = 1 mile



- Fish Passage Provided
- Fish Passage Failure
- Rock Pit
- Existing LTF

Road Data Card

Road Number: 8430000	ROD Road Number: 8430000	M.P.: 0.0	To M.P.: 13.18
Planned Length (miles):	Actual Length (miles): 13.18	New or Reconstruct:	reconstruction
Unit(s) Accessed:	Road Locator: existing		

ROAD MANAGEMENT OBJECTIVES

Functional Class: Local	Traffic Service Level: D	Highway Safety Act Number: NO
Design Vehicle: LT	Critical Vehicle: LT	Intended Purpose and Use: Silvicultural
Maintain Level: Active Sale 2 Post Sale 1	AFRPR STATUS: Close/active	Closure Device: Barrier
Management Strategy (Encourage, Accept, Discourage, Eliminate or Prohibit): Prohibit		Erosion Control: water bar
Other Considerations: Depending on alternative selected road to be closed at M.P. 10.50(approx.) Reconstruction may allow road to be opened to m.p. 11.26		

CULTURAL RESOURCES as planned: No Cultural Concerns JTA 2/5/98
as located: No Cultural Concerns JTA 2/5/98

ENGINEERING/ROADS

Recon/Location Narrative/Design Considerations (major drainages, road grades, future access, etc.): Prehaul and post haul maintenance will accommodate maintenance needs. Five culverts not providing fish passage will be reconstructed to provide passage or be removed per road condition survey completed in 1997. See appendix E.

Planned vs Implemented (describe changes and rationale):

Rock Source(s) Location and Special Mitigation: No special concerns. Pits located as shown on map.

FISH HABITAT

Culvert inspections completed in 1996 verified five Cmp's were failing to provide fish passage over Class II streams (See Chapter 3 -Road Condition Survey) (BMP 11.6). Road survey's also verified severe structural damage and blockage on water quality streams from milepost 11.10 to 13.16. All fish passage failures are scheduled for replacement/removal in 1998 from milepost 8.18 to milepost 13.16 (BMP 14.17). Culvert inspections will be required on a regular basis to ensure passage of all fish pipes. Timing restrictions will be required on all instream culvert maintenance for Class II streams that flow directly into Class I streams (BMP 14.6).

Stream Crossings As Planned (0 -Class I 5 - Class II 4 - Class III):

Stream Crossings As Located (Class I Class II Class III):

Cataloged Stream Crossings As Located:

GEOLOGY/KARST as planned: No concerns.
as located:

LANDS/MINERALS as planned: No concerns.
as located:

RECREATION/VISUALS as planned: No concerns.
as located:

SILVICULTURE as planned: No concerns. CT 3/11/98
as located:

SOILS / WATERSHED as planned:

Avoid the placement of fill and side-casting of waste material into wetlands (BMPs 12.5 and 14.19). Erosion control seeding of cutbanks and fillslopes should be implemented as soon as possible (BMPs 12.17 and 14.8) following reconstruction.

as located:

TIMBER/LOGGING SYSTEM/ADMINISTRATION as planned: No currently identified concerns AMG 3/11/98
as located:

WILDLIFE as planned: Road is within 0.5 miles of bald eagle nest. No blasting within 0.5 miles of eagle nest 3/1 -5/31. If nest is active, no blasting within 0.5 miles of nest 6/1 - 8/31.

as located:

Ranger's Signature

Date

Road Data Card

Road Number: 8430000

Aerial Photo Year: 91

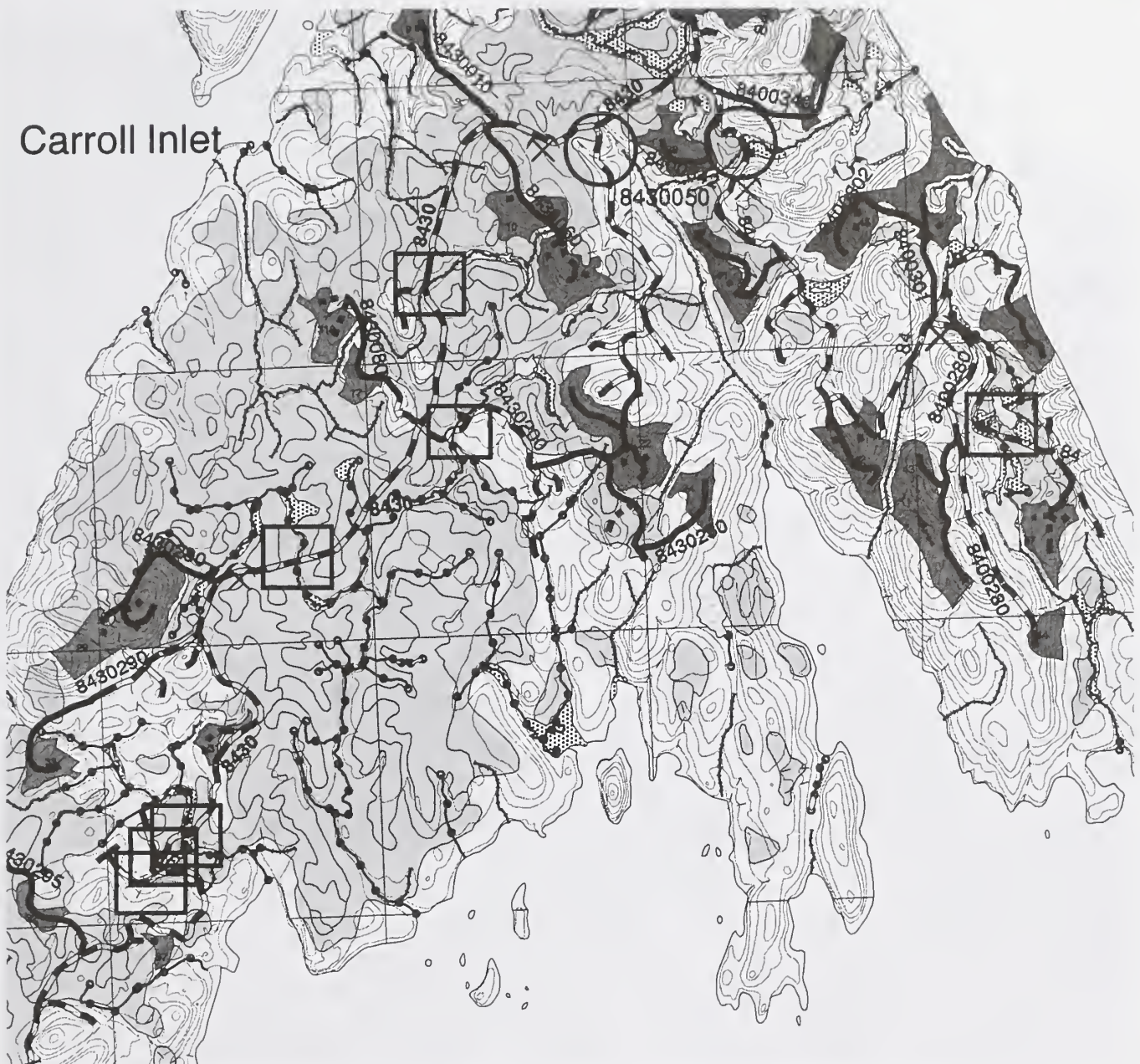
Map Number: KTN B4 NW

Photo Number: 1390-

Scale: 1 inch = 2640 feet

Line:

Carroll Inlet



Stream Classes

- Class 1 Streams
- Class 2 Streams
- Class 3 Streams

Roads

- Temp Spur
- Existing Road
- Proposed Road

Wetlands

- High Value Wetlands
- Other Wetlands
- 40' Contours
- Lakes
- Proposed Units
- Shoreline

2 inches = 1 mile



- Fish Passage Provided
- Fish Passage Failure
- Rock Pit
- Existing LTF

Road Data Card

Road Number: 8430000

Aerial Photo

Year: 91

Line:

Map Number: KTN B4 NW

Photo Number: 1390-

Scale: 1 inch = 2640 feet



Thorne Arm

Stream Classes

- Class 1 Streams
- Class 2 Streams
- Class 3 Streams

Roads

- Temp Spur
- Existing Road
- Proposed Road

Wetlands

- High Value Wetlands
- Other Wetlands
- 40' Contours
- Lakes
- Proposed Units
- Shoreline

2 inches = 1 mile



- Fish Passage Provided
- Fish Passage Failure
- Rock Pit
- Existing LTF

Road Data Card

Road Number: 8430000

Aerial Photo Year: 91

Line:

Map Number: KTN B4 NW

Photo Number: 1390-

Scale: 1 inch = 2640 feet



Stream Classes

- Class 1 Streams
- Class 2 Streams
- Class 3 Streams

Roads

- Temp Spur
- Existing Road
- Proposed Road

Wetlands

- High Value Wetlands
- Other Wetlands
- 40' Contours
- Lakes
- Proposed Units
- Shoreline

2 inches = 1 mile



- Fish Passage Provided
- Fish Passage Failure
- Rock Pit
- Existing LTF

Road Data Card

Road Number: 8430010	ROD Road Number: 8430010	M.P.: 0.0	To M.P.: 0.5
Planned Length (miles): 0.50	Actual Length (miles):	New or Reconstruct:	new construction
Unit(s) Accessed: 9	Road Locator:		

ROAD MANAGEMENT OBJECTIVES

Functional Class: L	Traffic Service Level: D	Highway Safety Act Number:
Design Vehicle: LT	Critical Vehicle: LT	Intended Purpose and Use: Silvicultural
Maintain Level: Active Sale 2	Post Sale 1	AFRPR STATUS: close
Management Strategy (Encourage, Accept, Discourage, Eliminate or Prohibit): Eliminate		Closure Device: barrier
Other Considerations:		Erosion Control: water bar

CULTURAL RESOURCES as planned: No Cultural Concerns JTA 2/5/98
as located: No Cultural Concerns JTA 2/5/98

ENGINEERING/ROADS

Recon/Location Narrative/Design Considerations (major drainages, road grades, future access, etc.): No significant areas of steep slopes, >67%, were crossed on this location.

Planned vs Implemented (describe changes and rationale):

Rock Source(s) Location and Special Mitigation: No special concerns. Fits located as shown on map.

FISH HABITAT

No fisheries concerns identified during hte planning phase. Additional recon is required after final road location is completed.

Stream Crossings As Planned (0 - Class I 0 - Class II 0 - Class III):

Stream Crossings As Located (Class I Class II Class III):

Cataloged Stream Crossings As Located:

GEOLOGY/KARST as planned: No concerns.

as located:

LANDS/MINERALS as planned: No concerns.

as located:

RECREATION/VISUALS as planned: No concerns.

as located:

SILVICULTURE as planned: No concerns. CT 3/11/98

as located:

SOILS / WATERSHED as planned:

The southern section of the 8430010 road is located on low value forested wetlands (BMPs 12.5 and 14.2). There are no practicable alternative road locations to access Harvest Unit 9 (BMP 14.2) that would avoid these wetlands. Use overlay road construction on wetlands and minimize side ditching, where practicable, to minimize the effects upon groundwater flow (BMP 14.3). Provide cross drains where needed to provide for the passage of surface water and aquatic organisms (BMP 12.5). Erosion control seeding of cutbanks and fillslopes should be implemented as soon as possible (BMPs 12.17 and 14.8) following construction..

as located:

TIMBER/LOGGING SYSTEM/ADMINISTRATION as planned:No currently identified concerns AMG 3/11/98

as located:

WILDLIFE as planned: No wildlife mitigation.

as located:

Ranger's Signature

Date

Road Data Card

Road Number: 8430010

Aerial Photo

Year: 91

Line:

Map Number: KTN B4 NW

Photo Number: 1390-81

Scale: 1 inch = 1320 feet



Stream Classes

- Class 1 Streams
- Class 2 Streams
- Class 3 Streams

Roads

- Temp Spur
- Existing Road
- Proposed Road

Wetlands

- High Value Wetlands
- Other Wetlands
- 40' Contours
- Lakes
- Proposed Units
- Shoreline

4 inches = 1 mile



- Fish Passage Provided
- Fish Passage Failure
- Rock Pit
- Existing LTF

Road Data Card

Road Number: 8430050	ROD Road Number: 8430050	M.P.: 0.0	To M.P.: 1.20
Planned Length (miles): 0.40 Miles new	Actual Length (miles): 0.82 Reconst	New or Reconstruct:	reconst. and new const
Unit(s) Accessed: 22	Road Locator: existing		

ROAD MANAGEMENT OBJECTIVES

Functional Class: Local	Traffic Service Level: D	Highway Safety Act Number: NO
Design Vehicle: LT	Critical Vehicle: LT	Intended Purpose and Use: Silvicultural
Maintain Level: Active Sale 2 Post Sale 1	AFRPR STATUS: Close	Closure Device: Barrier
Management Strategy (Encourage, Accept, Discourage, Eliminate or Prohibit): Eliminate		Erosion Control: water bar
Other Considerations:		

CULTURAL RESOURCES as planned: No Cultural Concerns JTA 2/5/98
as located: No Cultural Concerns JTA 2/5/98

ENGINEERING/ROADS

Recon/Location Narrative/Design Considerations (major drainages, road grades, future access, etc.): No significant areas of steep slopes, >67%, were crossed on this location.

Prehaul and post haul maintenance will accommodate maintenance needs. .

Planned vs Implemented (describe changes and rational):

Rock Source(s) Location and Special Mitigation: No special concerns. Pits located as shown on map.

FISH HABITAT

Road condition surveys completed in 1997 verified one Class II streamcrossing is currently failing to provide fish passage (See Chapter 3- Roads) . This crossing is scheduled for replacement in the summer of 1998 (BMP's 14.17 and 14.21). Ensure proper fish passage at this streamcrossing by installing a bridge or burying an oversized pipe. .

Stream Crossings As Planned (0 - Class I 1 - Class II 0 - Class III):

Stream Crossings As Located (Class I Class II Class III):

Cataloged Stream Crossings As Located:

GEOLOGY/KARST as planned: No concerns.

as located:

LANDS/MINERALS as planned: No concerns.

as located:

RECREATION/VISUALS as planned: No concerns.

as located:

SILVICULTURE as planned: No concerns. CT 3/11/98

as located:

SOILS / WATERSHED as planned:

Avoid the placement of fill or the side-casting of waste material into wetlands (BMPs 12.5 and 14.19). Erosion control seeding of cutbanks and fillslopes should be implemented as soon as possible (BMPs 12.17 and 14..8) following reconstruction..

as located:

TIMBER/LOGGING SYSTEM/ADMINISTRATION as planned:No currently identified concerns AMG 3/11/98

as located:

WILDLIFE as planned: No wildlife mitigation.

as located:

Ranger's Signature

Date

Road Data Card

Road Number: 8430050

Aerial Photo Year: 91

Line:

Map Number: KTN B4 NW

Photo Number: 1390-109

Scale: 1 inch = 1320 feet



Stream Classes

- Class 1 Streams
- Class 2 Streams
- Class 3 Streams

Roads

- Temp Spur
- Existing Road
- Proposed Road

Wetlands

- High Value Wetlands
- Other Wetlands
- 40' Contours
- Lakes
- Proposed Units
- Shoreline

4 inches = 1 mile



- Fish Passage Provided
- Fish Passage Failure
- Rock Pit
- Existing LTF

Road Data Card

Road Number: 8430060	ROD Road Number: 8430060	M.P.: 0.0	To M.P.: 0.70
Planned Length (miles): 0.70	Actual Length (miles):	New or Reconstruct:	new construction
Unit(s) Accessed: 10	Road Locator:		

ROAD MANAGEMENT OBJECTIVES

Functional Class: Local	Traffic Service Level: D	Highway Safety Act Number: NO
Design Vehicle: LT	Critical Vehicle: LT	Intended Purpose and Use: Silvicultural
Maintain Level: Active Sale 2 Post Sale 1	AFRPR STATUS: Close	Closure Device: Barrier
Management Strategy (Encourage, Accept, Discourage, Eliminate or Prohibit): Eliminate		Erosion Control: water bar
Other Considerations:		

CULTURAL RESOURCES as planned: No Cultural Concerns JTA 2/5/98
as located: No Cultural Concerns JTA 2/5/98

ENGINEERING/ROADS

Recon/Location Narrative/Design Considerations (major drainages, road grades, future access, etc.): No significant areas of steep slopes, >67%, were crossed on this location.

Planned vs Implemented (describe changes and rational): Final location should investigate moving road to avoid stream crossing

Rock Source(s) Location and Special Mitigation: No special concerns. Pits located as shown on map.

FISH HABITAT

Passage is required on all Class II streams located on this road. Additional reconnaissance is required to verify the presence of fish habitat present on one streamcrossing.

Stream Crossings As Planned (0 - Class I 1 - Class II 0 - Class III):

Stream Crossings As Located (Class I Class II Class III):

Cataloged Stream Crossings As Located:

GEOLOGY/KARST as planned: No concerns.
as located:

LANDS/MINERALS as planned: No concerns.
as located:

RECREATION/VISUALS as planned: No concerns.
as located:

SILVICULTURE as planned: No concerns. CT 3/11/98
as located:

SOILS / WATERSHED as planned:

The 8422000 road is located to avoid wetlands to the extent practicable (BMPs 12.5 and 14.2). The southern section of this road segment is located on forested wetlands. Use overlay road construction on wetlands and minimize side ditching, where practicable, to minimize the effects upon groundwater flow (BMP 14.3). Provide cross drains where needed to provide for the passage of surface water and aquatic organisms (BMP 12.5). Avoid the placement of fill material or the sidecasting of waste material into wetlands (BMP 14.19). Erosion control seeding of cutbanks and fillslopes should be implemented as soon as possible (BMPs 12.17 and 14.8) following construction..

as located:

TIMBER/LOGGING SYSTEM/ADMINISTRATION as planned:No currently identified concerns AMG 3/11/98
as located:

WILDLIFE as planned: No wildlife mitigation. Avoid Rare plant (*Platanthera orbiculata*) along flagline.
as located:

Ranger's Signature

Date

Road Data Card

Road Number: 8430060

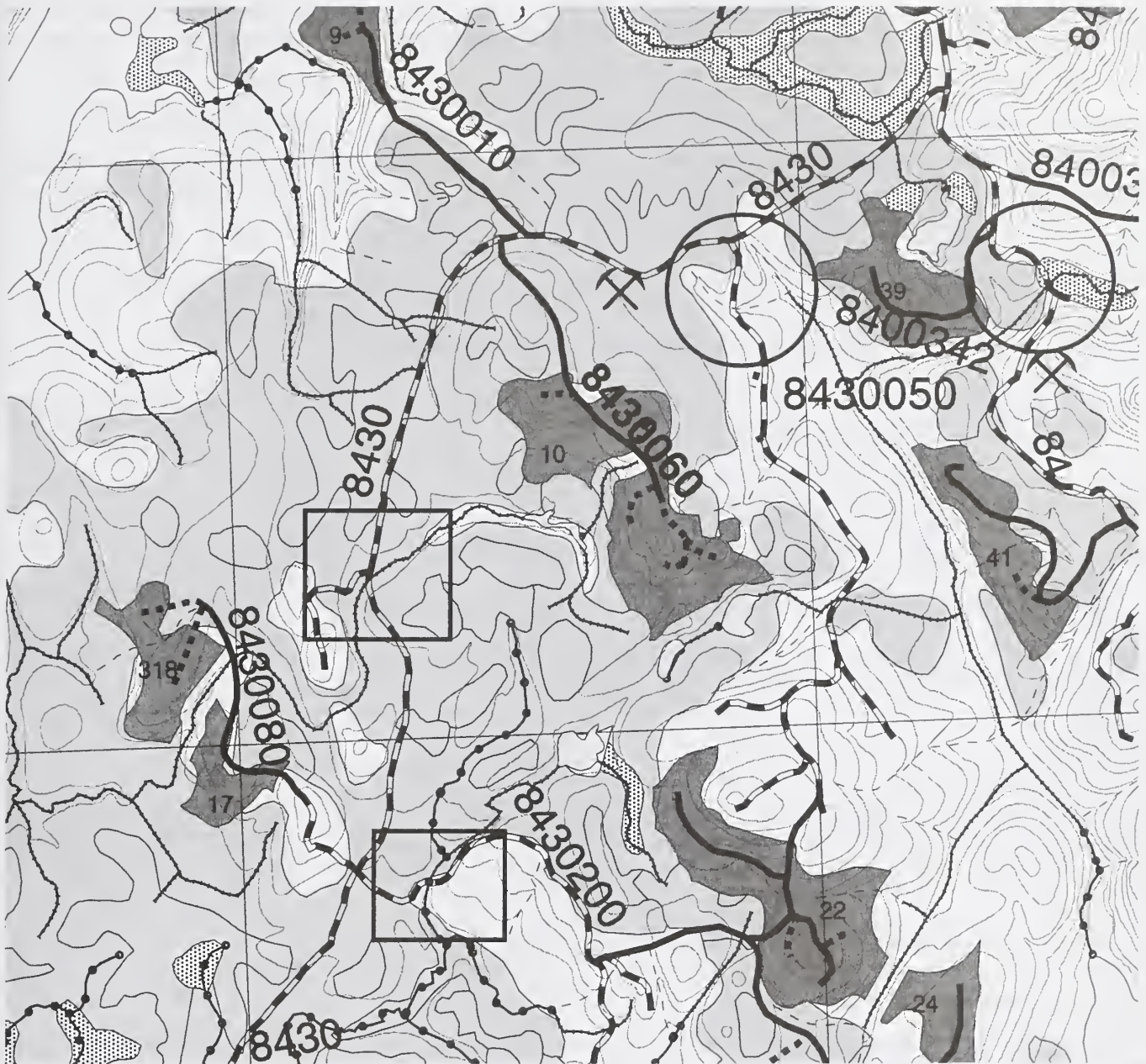
Aerial Photo Year: 91

Line:

Map Number: KTN B4 NW

Photo Number: 1390-108

Scale: 1 inch = 1320 feet



Stream Classes

- Class 1 Streams
- Class 2 Streams
- Class 3 Streams

Roads

- Temp Spur
- Existing Road
- Proposed Road

Wetlands

- High Value Wetlands
- Other Wetlands
- 40' Contours
- Lakes
- Proposed Units
- Shoreline

4 inches = 1 mile



- Fish Passage Provided
- Fish Passage Failure
- Rock Pit
- Existing LTF

Road Data Card

Road Number: 8430080	ROD Road Number: 8430080	M.P.: 0.0 To M.P.: 0.60
Planned Length (miles): 0.60 const. 0.2 reconst	Actual Length (miles):	New or Reconstruct: reconst. & new const.
Unit's Accessed: 318, 17	Road Locator: existing	

ROAD MANAGEMENT OBJECTIVES

Functional Class: Local	Traffic Service Level: D	Highway Safety Act Number: NO
Design Vehicle: LT	Critical Vehicle: LT	Intended Purpose and Use: Silvicultural
Maintain Level: Active Sale 2 Post Sale 1	AFRPR STATUS: Closed	Closure Device: Barrier
Management Strategy (Encourage, Accept, Discourage, Eliminate or Prohibit): Eliminate		Erosion Control: water bar
Other Considerations:		

CULTURAL RESOURCES as planned: No Cultural Concerns JTA 2/5/98
as located: No Cultural Concerns JTA 2/5/98

ENGINEERING/ROADS

Recon/Location Narrative/Design Considerations (major drainages, road grades, future access, etc.): No significant areas of steep slopes, >67%, were crossed on this location.

Planned vs Implemented (describe changes and rationale):

Rock Source(s) Location and Special Mitigation: No special concerns. Pits located as shown on map.

FISH HABITAT

Fish passage is required all Class II streams located on this road. Recommend installing a bridge or burying an oversized pipe to ensure fish passage is provided for resident fish (BMP 14.17). Additional fish passage may be required on some Class II streams after final road location is inspected by District Biologist (BMP 14.17). Recommend developing an erosion control plan for the Class II streamcrossing to help minimize sedimentation during the installation of structures (BMP 14.5).

Stream Crossings As Planned (0 - Class I 1 - Class II 1 - Class III):

Stream Crossings As Located (Class I Class II Class III):

Cataloged Stream Crossings As Located:

GEOLOGY/KARST as planned: No concerns.

as located:

LANDS/MINERALS as planned: No concerns.

as located:

RECREATION/VISUALS as planned: No concerns.

as located:

SILVICULTURE as planned: No concerns. CT 3/11/98

as located:

SOILS / WATERSHED as planned:

The 8430080 road is located to avoid wetlands to the extent practicable (BMPs 12.5 and 14.2). Thenorthern section of this road segment is located on forested wetlands. Use overlay road construction on wetlands and minimize side ditching, where practicable, to minimize the effects upon groundwater flow (BMP 14.3). Provide cross drains where needed to provide for the passage of surface water and aquatic organisms (BMP 12.5). Avoid the placement of fill material or the sidcasting of waste material into wetlands (BMP 14.19). Erosion control seeding of cutbanks and fillslopes should be implemented as soon as possible (BMPs 12.17 and 14.8) following construction..

as located:

TIMBER/LOGGING SYSTEM/ADMINISTRATION as planned:No currently identified concerns AMG 3/11/98

as located:

WILDLIFE as planned: No wildlife mitigation.

as located:

Ranger's Signature

Date

Road Data Card

Road Number: 8430080

Aerial Photo

Year: 91

Line:

Map Number: KTN B4 NW

Photo Number: 1390-108

Scale: 1 inch = 1320 feet



Stream Classes

- Class 1 Streams
- Class 2 Streams
- Class 3 Streams

Roads

- Temp Spur
- Existing Road
- Proposed Road

Wetlands

- High Value Wetlands
- Other Wetlands
- 40' Contours
- Lakes
- Proposed Units
- Shoreline

4 inches = 1 mile



- Fish Passage Provided
- Fish Passage Failure
- Rock Pit
- Existing LTF

Road Data Card

Road Number: 8430200	ROD Road Number: 8430200	M.P.: 0.0	To M.P.: 1.00
Planned Length (miles): 0.50 reconst 0.50 new const	Actual Length (miles):	New or Reconstruct:	reconst. and new const.
Unit(s) Accessed: 22, 24	Road Locator: existing		

ROAD MANAGEMENT OBJECTIVES

Functional Class: Local	Traffic Service Level: D	Highway Safety Act Number: NO
Design Vehicle: LT	Critical Vehicle: LT	Intended Purpose and Use: Silvicultural
Maintain Level: Active Sale 2 Post Sale 1	AFRPR STATUS: Closed	Closure Device: Barrier
Management Strategy (Encourage, Accept, Discourage, Eliminate or Prohibit): Eliminate		Erosion Control: water bar
Other Considerations:		

CULTURAL RESOURCES as planned: No Cultural Concerns JTA 2/5/98
as located: No Cultural Concerns 2/5/98

ENGINEERING/ROADS

Recon/Location Narrative/Design Considerations (major drainages, road grades, future access, etc.): No significant areas of steep slopes, >67%, were crossed on this location.

Planned vs Implemented (describe changes and rational):

Rock Source(s) Location and Special Mitigation: No special concerns. Pits located as shown on map.

FISH HABITAT

Road condition surveys (See Appendix E) completed in 1997 verified that all existing streamcrossings are functioning properly. Additional reconnaissance is required for a portion of the 8430200 road that will require new construction.

Stream Crossings As Planned (0 - Class I 0 - Class II 0 - Class III):

Stream Crossings As Located (Class I Class II Class III):

Cataloged Stream Crossings As Located:

GEOLOGY/KARST as planned: No concerns.

as located:

LANDS/MINERALS as planned: No concerns.

as located:

RECREATION/VISUALS as planned: No concerns.

as located:

SILVICULTURE as planned: No concerns. CT 3/11/98

as located:

SOILS / WATERSHED as planned:

The 8430200 road is located to avoid wetlands to the extent practicable (BMPs 12.5 and 14.2). Access to Harvest Unit 22 requires that the eastern section of this road segment include new construction on forested wetlands. Use overlay road construction on wetlands and minimize side ditching, where practicable, to minimize the effects upon groundwater flow (BMP 14.3). Provide cross drains where needed to provide for the passage of surface water and aquatic organisms (BMP 12.5). Avoid the placement of fill material or the sidecasting of waste material into wetlands (BMP 14.19). Erosion control seeding of cutbanks and fillslopes should be implemented as soon as possible (BMPs 12.17 and 14.8) following reconstruction and construction..

as located:

TIMBER/LOGGING SYSTEM/ADMINISTRATION as planned:No currently identified concerns AMG 3/11/98

as located:

WILDLIFE as planned: End of road is within 0.5 miles of bald eagle nest. No blasting with in 0.5 miles of eagle nest 3/1 -5/31. If nest is active, no blasting within 0.5 miles of nest 6/1 - 8/31.

as located:

Ranger's Signature

Date

Road Data Card

Road Number: 8430200

Aerial Photo

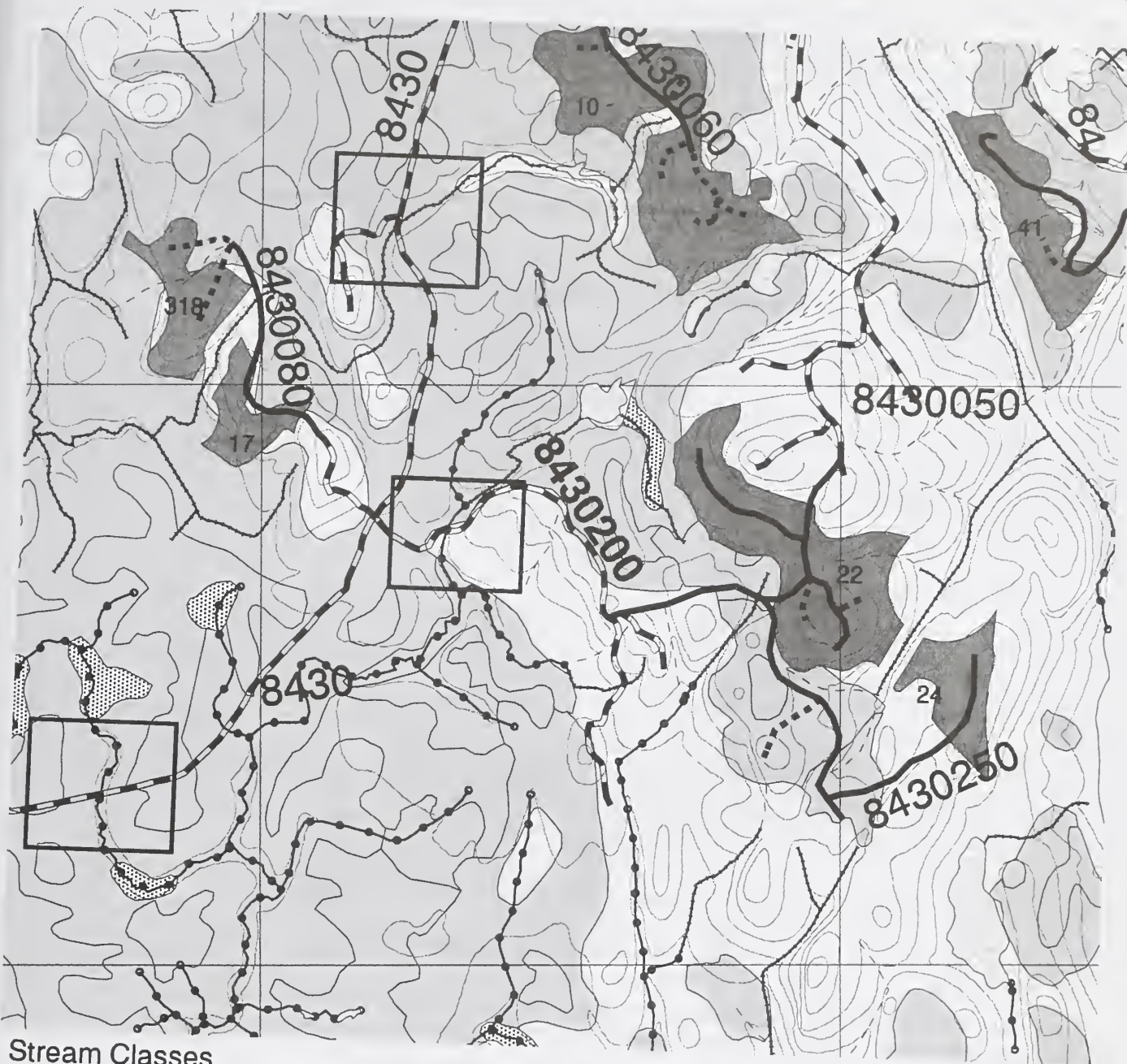
Year: 91

Line:

Map Number: KTN B4 NW

Photo Number: 1390-109

Scale: 1 inch = 1320 feet



Stream Classes

- Class 1 Streams
- Class 2 Streams
- Class 3 Streams

Roads

- Temp Spur
- Existing Road
- Proposed Road

Wetlands

- High Value Wetlands
- Other Wetlands
- 40' Contours
- Lakes
- Proposed Units
- Shoreline

4 inches = 1 mile



- Fish Passage Provided
- Fish Passage Failure
- Rock Pit
- Existing LTF

Road Data Card

Road Number: 8430250	ROD Road Number:	M.P.: 0.0	To M.P.: 0.7
Planned Length (miles): 0.7	Actual Length (miles):	New or Reconstruct:	new construction
Unit(s) Accessed: 24	Road Locator:		

ROAD MANAGEMENT OBJECTIVES

Functional Class: L	Traffic Service Level: D	Highway Safety Act Number:
Design Vehicle: LT	Critical Vehicle: LT	Intended Purpose and Use: Silvicultural
Maintain Level: Active Sale 2	Post Sale 1	AFRPR STATUS: Closed
Management Strategy (Encourage, Accept, Discourage, Eliminate or Prohibit): Eliminate		Closure Device: Barrier
Other Considerations: Close road (Obliterate)		Erosion Control: water bar

CULTURAL RESOURCES as planned: No Cultural Concerns JTA 2/5/98
as located: No Cultural Concerns JTA 2/5/98

ENGINEERING/ROADS

Recon/Location Narrative/Design Considerations (major drainages, road grades, future access, etc.): No significant areas of steep slopes, >67%, were crossed on this location.

Planned vs Implemented (describe changes and rationale):

Rock Source(s) Location and Special Mitigation: No special concerns. Pits located as shown on map.

FISH HABITAT

Fish passage is required on one Class II streamcrossings located on this road. Recommend installing a bridge or burying an oversized pipe to ensure proper fish passage for resident fish (BMP 14.17). Timing restrictions may also be required after final road location is reviewed by District Biologist (BMP 14.6).

Stream Crossings As Planned (0 - Class I 1 - Class II 1 - Class III):

Stream Crossings As Located (Class I Class II Class III):

Cataloged Stream Crossings As Located:

GEOLOGY/KARST as planned: No concerns.
as located:

LANDS/MINERALS as planned: No concerns.
as located:

RECREATION/VISUALS as planned: No concerns.
as located:

SILVICULTURE as planned: No concerns. CT 3/11/98
as located:

SOILS / WATERSHED as planned:

The 8430250 road is located to avoid wetlands to the extent practicable (BMPs 12.5 and 14.2). The western section of this road segment is located on scrub-shrub muskeg wetlands. Use overlay road construction on wetlands and minimize side ditching, where practicable, to minimize the effects upon groundwater flow (BMP 14.3). Provide cross drains where needed to provide for the passage of surface water and aquatic organisms (BMP 12.5). Avoid the placement of fill material or the sidcasting of waste material into wetlands (BMP 14.19). Erosion control seeding of cutbanks and fill-slopes should be implemented as soon as possible (BMPs 12.17 and 14.8) following construction..

as located:

TIMBER/LOGGING SYSTEM/ADMINISTRATION as planned:No currently identified concerns AMG 3/11/98
as located:

WILDLIFE as planned: Road is within 0.5 miles of bald eagle nest. No blasting within 0.5 miles of eagle nest 3/1 -5/31. If nest is active, no blasting within 0.5 miles of nest 6/1 - 8/31.
as located:

Ranger's Signature

Date

Road Data Card

Road Number: 8430250

Aerial Photo Year: 91

Map Number: KTN B4 NW

Line:

Photo Number: 1390-109

Scale: 1 inch = 1320 feet



Stream Classes

- Class 1 Streams
- Class 2 Streams
- Class 3 Streams

Roads

- Temp Spur
- Existing Road
- Proposed Road

Wetlands

- High Value Wetlands
- Other Wetlands
- 40' Contours
- Lakes
- Proposed Units
- Shoreline

4 inches = 1 mile



- Fish Passage Provided
- Fish Passage Failure
- Rock Pit
- Existing LTF

Road Data Card

Road Number: 8430280	ROD Road Number: 8430280	M.P. : 0.0	To M.P. : 0.40
Planned Length (miles): 0.40	Actual Length (miles):	New or Reconstruct:	new construction
Unit(s) Accessed: 29	Road Locator:		

ROAD MANAGEMENT OBJECTIVES

Functional Class: Local	Traffic Service Level: D	Highway Safety Act Number: NO
Design Vehicle: LT	Critical Vehicle: LT	Intended Purpose and Use: Silvicultural
Maintain Level: Active Sale 2 Post Sale 1	AFRPR STATUS: Closed	Closure Device: Barrier
Management Strategy (Encourage, Accept, Discourage, Eliminate or Prohibit): Eliminate		Erosion Control: water bar
Other Considerations:		

CULTURAL RESOURCES as planned: No Cultural Concerns JTA 2/5/98
as located: No Cultural Concerns JTA 2/5/98

ENGINEERING/ROADS

Recon/Location Narrative/Design Considerations (major drainages, road grades, future access, etc.): No significant areas of steep slopes, >67%, were crossed on this location.

Planned vs Implemented (describe changes and rationale): During final road location, investigate access from the west to facilitate logging systems and avoid class I crossing.

Rock Source(s) Location and Special Mitigation: No special concerns. Pits located as shown on map.

FISH HABITAT

Timing restrictions (June 15 - August 1) and passage requirements are required on the Class I stream located on this road (BMP's 14.6, 14.17). Ensure passage at this crossing by installing a bridge or burying an oversized CMP. Bridge will be short life bridge for this harvest activity only. Additional timing restrictions may be required for some Class III streamcourses after final road location is reviewed by District Biologist. Recommend developing an erosion control plan to help minimize sedimentation during installation of structures (BMP14.5).

Stream Crossings As Planned (1 - Class I 0 - Class II 1 - Class III):

Stream Crossings As Located (Class I - Class II - Class III):

Cataloged Stream Crossings As Located:

GEOLOGY/KARST as planned: No concerns.
as located:

LANDS/MINERALS as planned: No concerns.
as located:

RECREATION/VISUALS as planned: No concerns.
as located:

SILVICULTURE as planned: No concerns. CT 3/11/98
as located:

SOILS / WATERSHED as planned:

The 8430280 road is located to avoid low value forested wetlands and scrub-shrub muskeg (BMPs 12.5 and 14.2). A short, (about 500 feet) eastern section of this road segment is located on forested wetlands. Use overlay road construction on wetlands and minimize side ditching, where practicable, to minimize the effects upon groundwater flow (BMP 14.3). Provide cross drains where needed to provide for the passage of surface water and aquatic organisms (BMP 12.5). Avoid the placement of fill material or the sidecasting of waste material into wetlands (BMP 14.19). Erosion control seeding of cutbanks and fillslopes should be implemented as soon as possible (BMPs 12.17 and 14.8) following construction..

as located:

TIMBER/LOGGING SYSTEM/ADMINISTRATION as planned: No currently identified concerns AMG 3/11/98
as located:

WILDLIFE as planned: No wildlife mitigation.
as located:

Ranger's Signature

Date

Road Data Card

Road Number: 8430280

Aerial Photo Year: 91

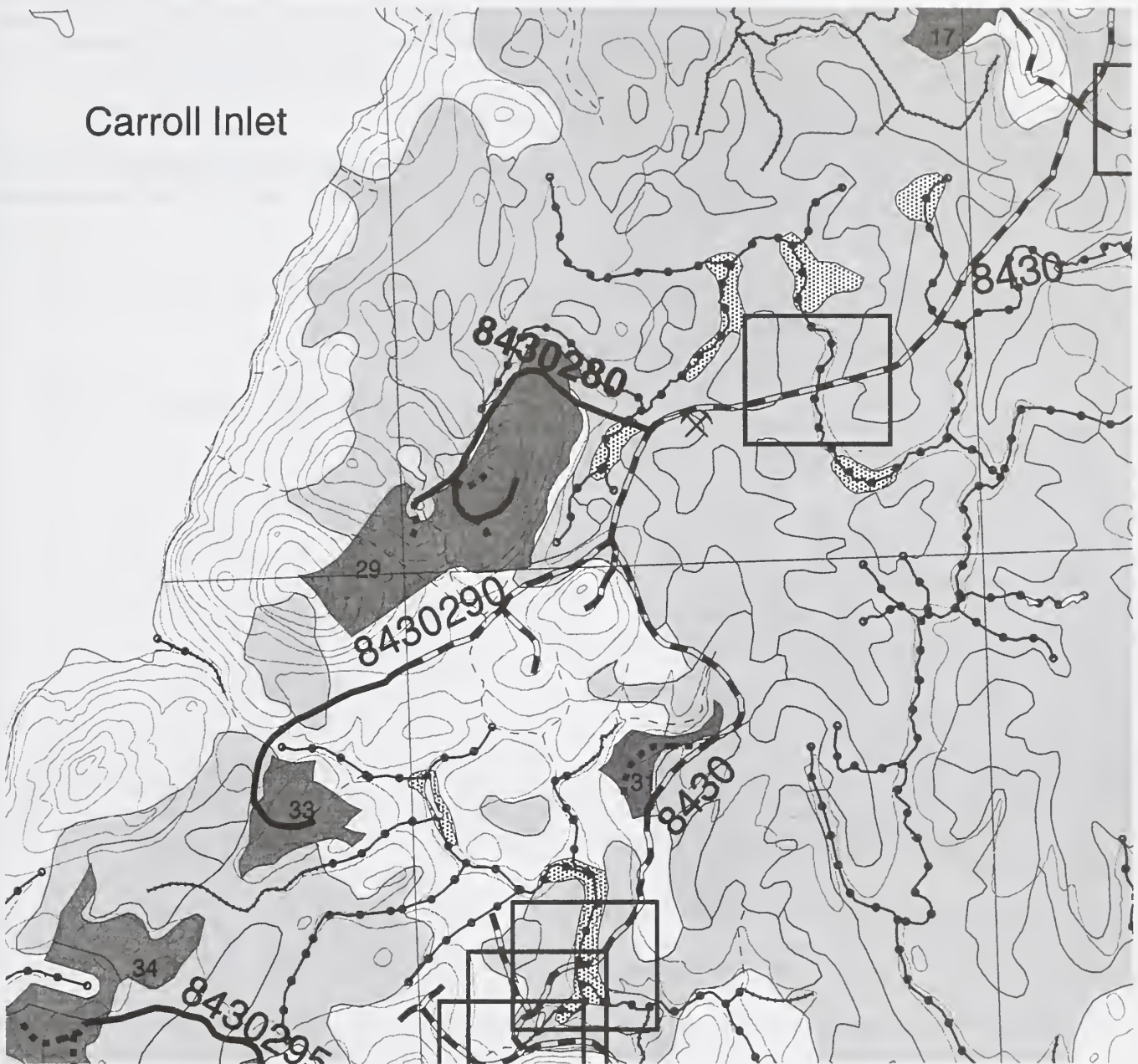
Line:

Map Number: KTN B4 NW

Photo Number: 1390-46

Scale: 1 inch = 1320 feet

Carroll Inlet



Stream Classes

- Class 1 Streams
- Class 2 Streams
- Class 3 Streams

Roads

- Temp Spur
- Existing Road
- Proposed Road

Wetlands

- High Value Wetlands
- Other Wetlands
- 40' Contours
- Lakes
- Proposed Units
- Shoreline

4 inches = 1 mile



- Fish Passage Provided
- Fish Passage Failure
- Rock Pit
- Existing LTF

Road Data Card

Road Number: 8430290	ROD Road Number: 8430290	M.P.: 0.0	To M.P.: 0.63
Planned Length (miles): 0.33 reconst 0.30 new const	Actual Length (miles):	New or Reconstruct:	reconst & new const
Unit(s) Accessed: 33	Road Locator:		

ROAD MANAGEMENT OBJECTIVES

Functional Class: Local	Traffic Service Level: D	Highway Safety Act Number: NO
Design Vehicle: LT	Critical Vehicle: LT	Intended Purpose and Use: Silvicultural
Maintain Level: Active Sale 2 Post Sale 1	AFRPR STATUS: Closed	Closure Device: Barrier
Management Strategy (Encourage, Accept, Discourage, Eliminate or Prohibit): Eliminate		Erosion Control: water bar
Other Considerations:		

CULTURAL RESOURCES as planned: No Cultural Concerns JTA 2/5/98
as located: No Cultural Concerns JTA 2/5/98

ENGINEERING/ROADS

Recon/Location Narrative/Design Considerations (major drainages, road grades, future access, etc.): No significant areas of steep slopes, >67%, were crossed on this location.

Planned vs Implemented (describe changes and rational):

Rock Source(s) Location and Special Mitigation: No special concerns. Pits located as shown on map.

FISH HABITAT

Timing restrictions may be required on some Class III water quality streams after final road location is inspected by District Biologist (BMP 14.6). Class III stream crossing will have cmp with less than 1200mm diameter cmp.

Stream Crossings As Planned (0 - Class I 0 - Class II 1 - Class III):

Stream Crossings As Located (Class I Class II Class III):

Cataloged Stream Crossings As Located:

GEOLOGY/KARST as planned: No concerns.
as located:

LANDS/MINERALS as planned: No concerns.
as located:

RECREATION/VISUALS as planned: No concerns.
as located:

SILVICULTURE as planned: No concerns. CT 3/11/98
as located:

SOILS / WATERSHED as planned:

The 8430290 road is located to avoid wetlands to the extent practicable (BMPs 12.5 and 14.2). The southern section of this road segment adjacent to Harvest Unit 33 is located on forested wetlands. Use overlay road construction on wetlands and minimize side ditching, where practicable, to minimize the effects upon groundwater flow (BMP 14.3). Provide cross drains where needed to provide for the passage of surface water and aquatic organisms (BMP 12.5). Avoid the placement of fill material or the sidecasting of waste material into wetlands (BMP 14.19). Erosion control seeding of cutbanks and fillslopes should be implemented as soon as possible (BMPs 12.17 and 14.8) following construction and reconstruction..

as located:

TIMBER/LOGGING SYSTEM/ADMINISTRATION as planned: No currently identified concerns AMG 3/11/98
as located:

WILDLIFE as planned: New construction is within 0.5 miles of bald eagle nest. No blasting with in 0.5 miles of eagle nest 3/1 -5/31. If nest is active, no blasting within 0.5 miles of nest 6/1 - 8/31.

as located:

Ranger's Signature

Date

Road Data Card

Road Number: 8430290

Aerial Photo Year: 91

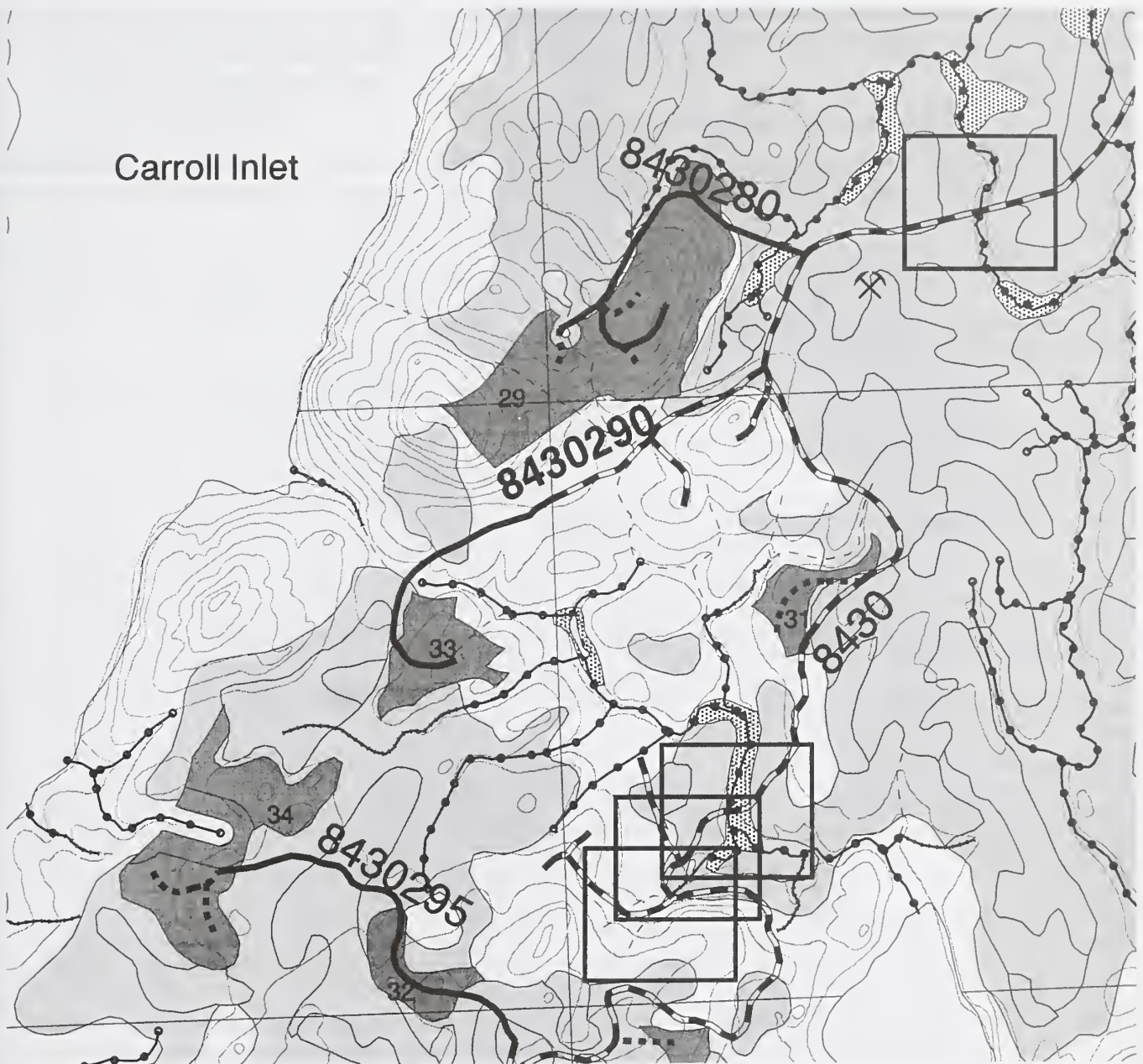
Map Number: KTN B4NW

Photo Number: 1390-47

Scale: 1 inch = 1320 feet

Line:

Carroll Inlet



Stream Classes

- Class 1 Streams
- Class 2 Streams
- Class 3 Streams

Roads

- Temp Spur
- Existing Road
- Proposed Road

Wetlands

- High Value Wetlands
- Other Wetlands
- 40' Contours
- Lakes
- Proposed Units
- Shoreline

4 inches = 1 mile



- Fish Passage Provided
- Fish Passage Failure
- Rock Pit
- Existing LTF

Road Data Card

Road Number: 8430295	ROD Road Number: 8430295	M.P. : 0.0	To M.P. : 0.60
Planned Length (miles): 0.60 new const	Actual Length (miles):	New or Reconstruct:	new const.
Unit(s) Accessed: 32, 34	Road Locator:		

ROAD MANAGEMENT OBJECTIVES

Functional Class: Local	Traffic Service Level: D	Highway Safety Act Number: NO
Design Vehicle: LT	Critical Vehicle: LT	Intended Purpose and Use: Silvicultural
Maintain Level: Active Sale 2 Post Sale 1	AFRPR STATUS: Closed	Closure Device: Barrier
Management Strategy (Encourage, Accept, Discourage, Eliminate or Prohibit): Eliminate		Erosion Control: water bar
Other Considerations:		

CULTURAL RESOURCES as planned:
as located:

ENGINEERING/ROADS

Recon/Location Narrative/Design Considerations (major drainages, road grades, future access, etc.): No significant areas of steep slopes, >67%, were crossed on this location.

Planned vs Implemented (describe changes and rationale):

Rock Source(s) Location and Special Mitigation: No special concerns. Pits located as shown on map.

FISH HABITAT

No streamcrossings have been identified during the planning phase. Timing restrictions may be required on some Class III streams after final road location is reviewed by District Biologist (BMP 14.17).

Stream Crossings As Planned (0 -Class I 0 -Class II 0 - Class III):

Stream Crossings As Located (Class I - Class II - Class III):

Cataloged Stream Crossings As Located:

GEOLOGY/KARST as planned:

No concerns.

as located:

LANDS/MINERALS as planned: No concerns.

as located:

RECREATION/VISUALS as planned: No concerns.

as located:

SILVICULTURE as planned: No concerns. CT 3/11/98

as located:

SOILS / WATERSHED as planned:

The 8430295 road is located almost entirely on low value forested wetlands and scrub-shrub muskeg (BMPs 12.5 and 14.2). There are no practicable alternative road locations on non-wetlands to access Harvest Units 32 and 34. Use overlay road construction on wetlands and minimize side ditching, where practicable, to minimize the effects upon groundwater flow (BMP 14.3). Provide cross drains where needed to provide for the passage of surface water and aquatic organisms (BMP 12.5). Avoid the placement of fill material or the sidelasting of waste material into wetlands (BMP 14.19). Erosion control seeding of cutbanks and fillslopes should be implemented as soon as possible (BMPs 12.17 and 14.8) following construction..

as located:

TIMBER/LOGGING SYSTEM/ADMINISTRATION as planned: No currently identified concerns AMG 3/11/98

as located:

WILDLIFE as planned: No wildlife mitigation.

as located:

Ranger's Signature

Date

Road Data Card

Road Number: 8430295

Map Number: KTN B4 NW

Scale: 1 inch = 1320 feet

Aerial Photo Year: 91




Line:

Photo Number:


1390-47




Stream Classes

-  Class 1 Streams
-  Class 2 Streams
-  Class 3 Streams

Roads





-  Temp Spur
-  Existing Road
-  Proposed Road

Wetlands

-  High Value Wetlands
-  Other Wetlands
-  40' Contours
-  Lakes
-  Proposed Units
-  Shoreline

4 inches = 1 mile



-  Fish Passage Provided
-  Fish Passage Failure
-  Rock Pit
-  Existing LTF

Road Data Card

Road Number: 8430300
Planned Length (miles): 0.70
Unit(s) Accessed: 171,172

ROD Road Number: 8430300
Actual Length (miles):
Road Locator:

M.P.: 0.0 To M.P.: 0.70
New or Reconstruct: new const

ROAD MANAGEMENT OBJECTIVES

Functional Class: Local Traffic Service Level: D Highway Safety Act Number: NO
Design Vehicle: LT Critical Vehicle: LT Intended Purpose and Use: Silvicultural
Maintain Level: Active Sale 2 Post Sale 1 AFRPR STATUS: Closed Closure Device: Barrier
Management Strategy (Encourage, Accept, Discourage, Eliminate or Prohibit): Eliminate Erosion Control: water bar
Other Considerations:

CULTURAL RESOURCES as planned: No Cultural Concerns JTA 2/5/98
as located: NO Cultural Concerns JTA 2/5/98

ENGINEERING/ROADS

Recon/Location Narrative/Design Considerations (major drainages, road grades, future access, etc.): No significant areas of steep slopes, >67%, were crossed on this location.

Planned vs Implemented (describe changes and rational):

Rock Source(s) Location and Special Mitigation: No special concerns. Pits located as shown on map.

FISH HABITAT

Fish passage is required on all Class II stream located on this proposed road (BMP 14.17). Timing restrictions may be required on some Class II streams after final road location is reviewed by the District Biologist (BMP 14.6). Recommend developing erosion control plans for all Class II streamcrossings to help minimize sedimentation (BMP 14.5). Crossing of class II stream will be short term bridge.

Stream Crossings As Planned (0 - Class I 1- Class II 0 - Class III):

Stream Crossings As Located (Class I Class II Class III):

Cataloged Stream Crossings As Located:

GEOLOGY/KARST as planned:

The western sections of the 8430300 road is located within a low vulnerability karst area. Low vulnerability karstlands are those areas where land management activity impacts are not likely to be greater than those posed by similar activities on non-carbonate substrate. No special management practices are anticipated to protect karst resources.

as located:

LANDS/MINERALS as planned:

as located:

RECREATION/VISUALS as planned:

as located:

SILVICULTURE as planned:

as located:

SOILS / WATERSHED as planned:

The 8430300 road is located to avoid wetlands to the extent practicable (BMPs 12.5 and 14.2). Several short sections of this road segment are located on forested wetlands. Use overlay road construction on wetlands and minimize side ditching, where practicable, to minimize the effects upon groundwater flow (BMP 14.3). Provide cross drains where needed to provide for the passage of surface water and aquatic organisms (BMP 12.5). Avoid the placement of fill material or the sidelaying of waste material into wetlands (BMP 14.19). Erosion control seeding of cutbanks and fillslopes should be implemented as soon as possible (BMPs 12.17 and 14.8) following construction.

as located:

TIMBER/LOGGING SYSTEM/ADMINISTRATION as planned:

as located:

WILDLIFE as planned:

as located:

Ranger's Signature

Date

Road Data Card

Road Number: 8430300

Aerial Photo Year: 91

Map Number: KTN B4 NW

Line:

Photo Number: 1390-49

Scale: 1 inch = 1320 feet



Stream Classes

- Class 1 Streams
- Class 2 Streams
- Class 3 Streams

Roads

- Temp Spur
- Existing Road
- Proposed Road

Wetlands

- High Value Wetlands
- Other Wetlands
- 40' Contours
- Lakes
- Proposed Units
- Shoreline

4 inches = 1 mile



- Fish Passage Provided
- Fish Passage Failure
- Rock Pit
- Existing LTF

Road Data Card

Road Number: 8430500	ROD Road Number:	M.P.: 0.0	To M.P.: 1.70
Planned Length (miles): 1.70	Actual Length (miles):	New or Reconstruct:	reconstruction
Unit(s) Accessed: 169	Road Locator:		

ROAD MANAGEMENT OBJECTIVES

Functional Class: L	Traffic Service Level: D	Highway Safety Act Number:
Design Vehicle: LT	Critical Vehicle: LT	Intended Purpose and Use: Silvicultural
Maintain Level: Active Sale 2	Post Sale 1	AFRPR STATUS: Close
Management Strategy (Encourage, Accept, Discourage, Eliminate or Prohibit): Eliminate		Closure Device: Barrier
Other Considerations: Close road (Obliterate)		Erosion Control: water bar

CULTURAL RESOURCES as planned:

as located:

ENGINEERING/ROADS

Recon/Location Narrative/Design Considerations (major drainages, road grades, future access, etc.):

Planned vs Implemented (describe changes and rational):

Rock Source(s) Location and Special Mitigation: No special concerns. Pits located as shown on map.

FISH HABITAT

Road Condition Survey's completed in 1997 verified extensive road maintenance is required for this road (BMP 11.6). Recommend that all cmp's are removed and cutbanks stabilized to prevent further erosion (BMP 14.2).

Stream Crossings As Planned (0 - Class I 0 - Class II 1 - Class III):

Stream Crossings As Located (Class I - Class II - Class III):

Cataloged Stream Crossings As Located:

GEOLOGY/KARST as planned: No concerns.

as located:

LANDS/MINERALS as planned: No concerns.

as located:

RECREATION/VISUALS as planned: No concerns.

as located:

SILVICULTURE as planned: No concerns. CT 3/11/98

as located:

SOILS / WATERSHED as planned: The 8430500 will be closed and stabilized. Stream crossings will be pulled and cutbanks stabilized (BMP 14.20). Avoid the placement of fill material or the sidecasting of waste material into wetlands (BMP 14.19). Erosion control seeding of cutbanks and fillslopes should be implemented as soon as possible (BMPs 12.17 and 14.8) following construction..

as located:

TIMBER/LOGGING SYSTEM/ADMINISTRATION as planned: No currently identified concerns AMG 3/11/98

as located:

WILDLIFE as planned: No wildlife mitigation.

as located:

Ranger's Signature

Date

Road Data Card

Road Number: 8430500

Map Number: KTN B4 NW

Scale: 1 inch = 1320 feet




Aerial Photo Year: 91

Line:




Photo Number: 1390-73



Stream Classes

-  Class 1 Streams
-  Class 2 Streams
-  Class 3 Streams

Roads





-  Temp Spur
-  Existing Road
-  Proposed Road

Wetlands

-  High Value Wetlands
-  Other Wetlands
-  40' Contours
-  Lakes
-  Proposed Units
-  Shoreline

4 inches = 1 mile



-  Fish Passage Provided
-  Fish Passage Failure
-  Rock Pit
-  Existing LTF

Road Data Card

Road Number: 8430550	ROD Road Number:	M.P.: 0.0	To M.P.: 0.50
Planned Length (miles): 0.00	Actual Length (miles): 0.50	New or Reconstruct:	reconstruction
Unit(s) Accessed: NONE	Road Locator:		

ROAD MANAGEMENT OBJECTIVES

Functional Class: L	Traffic Service Level: D	Highway Safety Act Number:
Design Vehicle: LT	Critical Vehicle: LT	Intended Purpose and Use: Silvicultural
Maintain Level: Active Sale 2	Post Sale 1	AFRPR STATUS: Close
Management Strategy (Encourage, Accept, Discourage, Eliminate or Prohibit): Eliminate		Closure Device: Barrier
Other Considerations: Close road (Obliterate)		Erosion Control:

CULTURAL RESOURCES as planned: No Cultural Concerns JTA 2/5/98
as located: No Cultural Concerns JTA 2/5/98

ENGINEERING/ROADS

Recon/Location Narrative/Design Considerations (major drainages, road grades, future access, etc.): No future use foreseeable, obliterate road, and reseed entire r/w. No significant areas of steep slopes, >67%, were crossed on this location.

Planned vs Implemented (describe changes and rational):

Rock Source(s) Location and Special Mitigation: No special concerns. Pits located as shown on map.

FISH HABITAT

Road Condition Survey's completed in 1997 verified culvert damage and blockage. Recommend closing this road segment to prevent further erosion.

Stream Crossings As Planned (0 - Class I 0 - Class II 0 - Class III):

Stream Crossings As Located (Class I Class II Class III):

Cataloged Stream Crossings As Located:

GEOLOGY/KARST as planned: No concerns.
as located:

LANDS/MINERALS as planned: No concerns.
as located:

RECREATION/VISUALS as planned: No concerns.
as located:

SILVICULTURE as planned: No concerns. CT 3/11/98
as located:

SOILS / WATERSHED as planned:

This road is planned for closure and stabilization (BMP 14.20). Stream crossings will be pulled, roadbed will be waterbarred and cutslopes will be stabilized. Avoid the placement of fill material or the sidecasting of waste material into wetlands (BMP 14.19). Erosion control seeding of cutbanks and fillslopes should be implemented as soon as possible (BMPs 12.17 and 14.8) following construction.

as located:

TIMBER/LOGGING SYSTEM/ADMINISTRATION as planned:No currently identified concerns AMG 3/11/98
as located:

WILDLIFE as planned: No wildlife mitigation.
as located:

Ranger's Signature

Date

Road Data Card

Road Number: 8430550

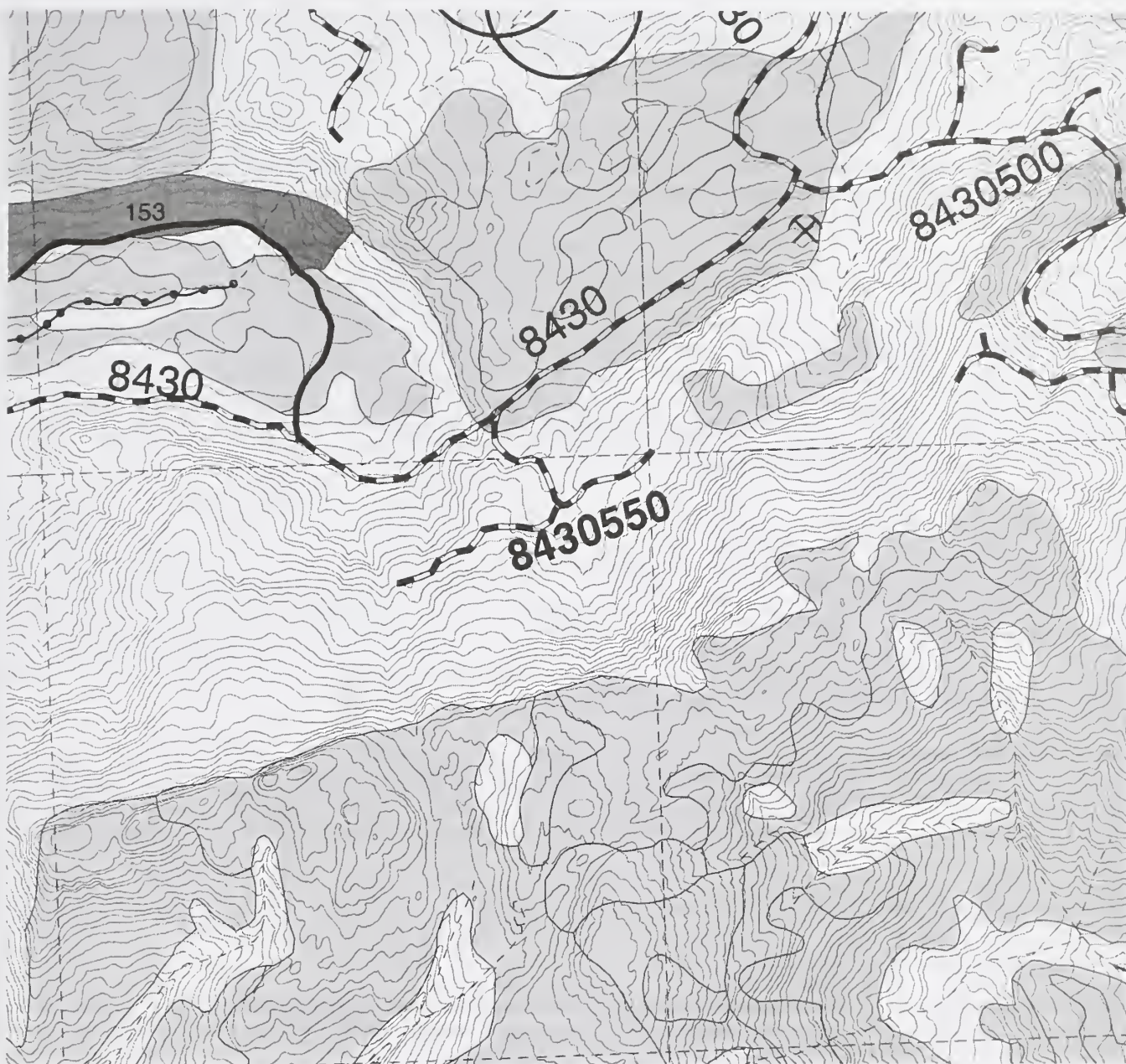
Aerial Photo Year: 91

Line:

Map Number: KTN B4 NW

Photo Number: 1390-52

Scale: 1 inch = 1320 feet



Stream Classes

- Class 1 Streams
- Class 2 Streams
- Class 3 Streams

Roads

- Temp Spur
- Existing Road
- Proposed Road

Wetlands

- High Value Wetlands
- Other Wetlands
- 40' Contours
- Lakes
- Proposed Units
- Shoreline

4 inches = 1 mile



- Fish Passage Provided
- Fish Passage Failure
- Rock Pit
- Existing LTF

Road Data Card

Road Number: 8430570	ROD Road Number: 8430570	M.P.: 0.0	To M.P.: 0.60
Planned Length (miles): 0.60	Actual Length (miles):	New or Reconstruct:	new const
Unit(s) Accessed: 153	Road Locator:		

ROAD MANAGEMENT OBJECTIVES

Functional Class: Local	Traffic Service Level: D	Highway Safety Act Number: NO
Design Vehicle: LT	Critical Vehicle: LT	Intended Purpose and Use: Silvicultural
Maintain Level: Active Sale 2 Post Sale 1	AFRPR STATUS: Close	Closure Device: Barrier
Management Strategy (Encourage, Accept, Discourage, Eliminate or Prohibit): Eliminate		Erosion Control: water ba
Other Considerations:		

CULTURAL RESOURCES as planned: as located:

ENGINEERING/ROADS

Recon/Location Narrative/Design Considerations (major drainages, road grades, future access, etc.): No significant areas of steep slopes, >67%, were crossed on this location.

Planned vs Implemented (describe changes and rational):

Rock Source(s) Location and Special Mitigation: No special concerns. Pits located as shown on map.

FISH HABITAT

Field reconnaissance will be required for this road to identify any water quality stream that may need CMP's. Timing restrictions(July 18 - August 7) for all instream road construction may be required for some Class III streams identified after final road location is reviewed by the District Biologist (BMP 14.17).

Stream Crossings As Planned (0-Class I 0- Class II 0-Class III):

Stream Crossings As Located (Class I Class II Class III):

Cataloged Stream Crossings As Located:

GEOLOGY/KARST as planned: No concerns. as located:

LANDS/MINERALS as planned: No concerns. as located:

RECREATION/VISUALS as planned: No concerns. as located:

SILVICULTURE as planned: No concerns. CT 3/11/98 as located:

SOILS / WATERSHED as planned:

The 8430570 road is located to avoid wetlands to the extent practicable (BMPs 12.5 and 14.2). The southern sections of this road segment cross low value forested wetlands.. Use overlay road construction on wetlands and minimize side ditching, where practicable, to minimize the effects upon groundwater flow (BMP 14.3). Provide cross drains where needed to provide for the passage of surface water and aquatic organisms (BMP 12.5). Avoid the placement of fill material or the sidecasting of waste material into wetlands (BMP 14.19). Erosion control seeding of cutbanks and fillslopes should be implemented as soon as possible (BMPs 12.17 and 14.8) following construction..

as located:

TIMBER/LOGGING SYSTEM/ADMINISTRATION as planned:No currently identified concerns AMG 3/11/98 as located:

WILDLIFE as planned: No wildlife mitigation. as located:

Ranger's Signature

Date

Road Data Card

Road Number: 8430570

Aerial Photo

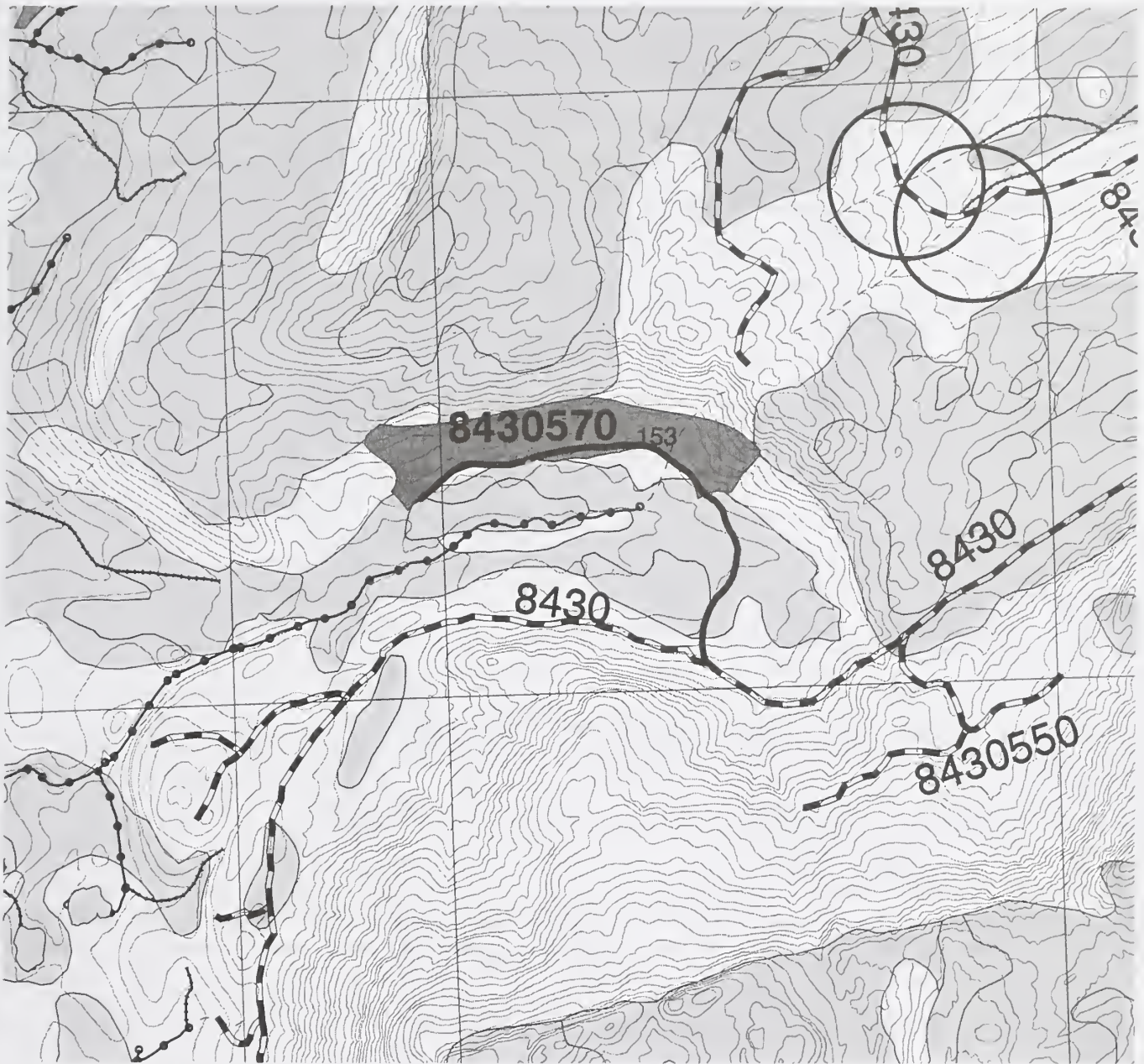
Year: 91

Line:

Map Number: KTN B4 NW

Photo Number: 1390-52

Scale: 1 inch = 1320 feet



Stream Classes

- Class 1 Streams
- Class 2 Streams
- Class 3 Streams

Roads

- Temp Spur
- Existing Road
- Proposed Road

Wetlands

- High Value Wetlands
- Other Wetlands
- 40' Contours
- Lakes
- Proposed Units
- Shoreline

4 inches = 1 mile



- Fish Passage Provided
- Fish Passage Failure
- Rock Pit
- Existing LTF

Road Data Card

Road Number: 8430600	ROD Road Number:	M.P.: 0.0	To M.P.: 0.71
Planned Length (miles):	Actual Length (miles):	New or Reconstruct:	reconstruction
Unit(s) Accessed: None	Road Locator:		

ROAD MANAGEMENT OBJECTIVES

Functional Class: L	Traffic Service Level: D	Highway Safety Act Number:
Design Vehicle: LT	Critical Vehicle: LT	Intended Purpose and Use: Silvicultural
Maintain Level: Active Sale 2	Post Sale 1	AFRPR STATUS: Close
Management Strategy (Encourage, Accept, Discourage, Eliminate or Prohibit): Eliminate		Closure Device: Barrier
Other Considerations: Close road (Obliterate)		Erosion Control: water bar

CULTURAL RESOURCES as planned: No Cultural Concerns JTA 2/5/98
as located: No Cultural Concerns JTA 2/5/98

ENGINEERING/ROADS

Recon/Location Narrative/Design Considerations (major drainages, road grades, future access, etc.):
Planned vs Implemented (describe changes and rational):
Rock Source(s) Location and Special Mitigation: No special concerns. Pits located as shown on map.

FISH HABITAT

No fisheries concerns identified.
Stream Crossings As Planned (0 - Class I 0 - Class II 0- Class III):
Stream Crossings As Located (Class I Class II Class III):
Cataloged Stream Crossings As Located:

GEOLOGY/KARST as planned: No concerns.
as located:

LANDS/MINERALS as planned: No concerns.
as located:

RECREATION/VISUALS as planned: No concerns.
as located:

SILVICULTURE as planned: No concerns. CT 3/11/98
as located:

SOILS / WATERSHED as planned:

The 8430600 is planned to be closed (BMP 14.20). Stream crossings will be pulled, road surface water-barred and cutslopes will be stabilized. Avoid the placement of fill material or the sidercasting of waste material into wetlands (BMP 14.19). Erosion control seeding of cutbanks and fillslopes should be implemented as soon as possible (BMPs 12.17 and 14..8) following construction..
as located:

TIMBER/LOGGING SYSTEM/ADMINISTRATION as planned:No currently identified concerns AMG 3/11/98
as located:

WILDLIFE as planned: No wildlife mitigation.
as located:

Ranger's Signature

Date

Road Data Card

Road Number: 8430600

Aerial Photo

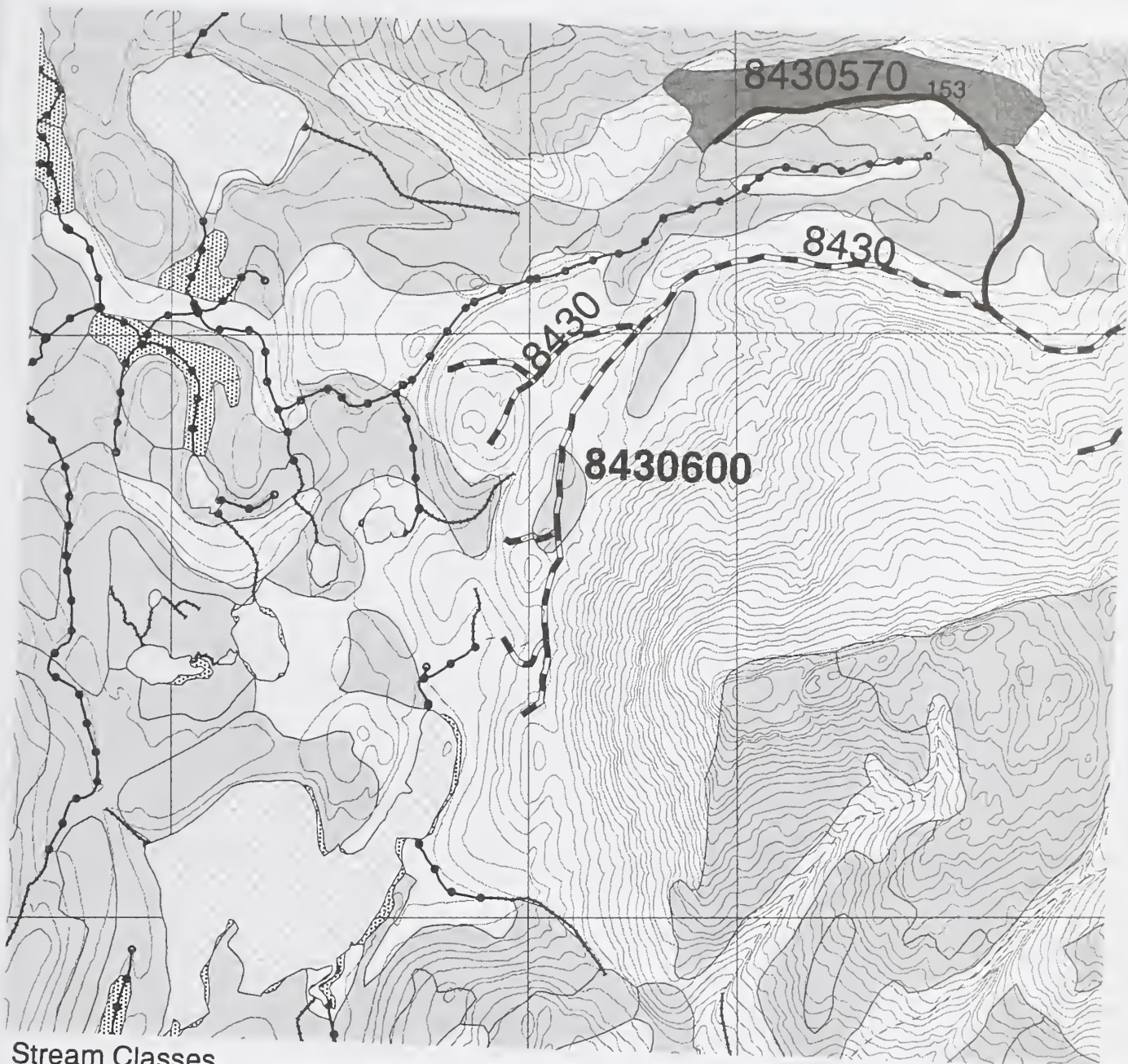
Year: 91

Line:

Map Number: KTN B4 NW

Photo Number: 1390-52

Scale: 1 inch = 1320 feet



Stream Classes

- Class 1 Streams
- Class 2 Streams
- Class 3 Streams

Roads

- Temp Spur
- Existing Road
- Proposed Road

Wetlands

- High Value Wetlands
- Other Wetlands
- 40' Contours
- Lakes
- Proposed Units
- Shoreline

4 inches = 1 mile



- Fish Passage Provided
- Fish Passage Failure
- Rock Pit
- Existing LTF

Road Data Card

Road Number: 8435000	ROD Road Number: 8435000	M.P.: 0.0	To M.P.: 3.79
Planned Length (miles): 2.79 reconst 1.00 new const	Actual Length (miles):	New or Reconstruct:	reconst and new const
Unit(s) Accessed: 175,176	Road Locator:		

ROAD MANAGEMENT OBJECTIVES

Functional Class: Local	Traffic Service Level: D	Highway Safety Act Number: NO
Design Vehicle: LT	Critical Vehicle: LT	Intended Purpose and Use: Silvicultural
Maintain Level: Active Sale 2 Post Sale 1		Closure Device: Barrier
Management Strategy (Encourage, Accept, Discourage, Eliminate or Prohibit): Eliminate		Erosion Control: water bar
Other Considerations: Obliterate road whether used on this project or not.		

CULTURAL RESOURCES as planned:
as located:

ENGINEERING/ROADS

Recon/Location Narrative/Design Considerations (major drainages, road grades, future access, etc.): No significant areas of steep slopes, >67%, were crossed on this location.

Planned vs Implemented (describe changes and rationale):

Rock Source(s) Location and Special Mitigation: No special concerns. Pits located as shown on map.

FISH HABITAT

Road condition surveys completed in 1997 verified a fish passage failure at milepost .03 on the existing portion of Road 8435 (BMP 11.6). Replacement of this fish pipe and all other culverts currently failing due to structural damage or blockage will be repaired in 1998 (BMP 14.2). For the new construction, timing restrictions (July 18 - August 7) may be required for some Class III streams after final road location is inspected by District Biologist.

Stream Crossings As Planned (0 - Class I 0 - Class II 1 - Class III):

Stream Crossings As Located (Class I Class II Class III):

Cataloged Stream Crossings As Located:

GEOLOGY/KARST as planned: No concerns.
as located:

LANDS/MINERALS as planned: No concerns.
as located:

RECREATION/VISUALS as planned: Along portions of road visible from Thome Arm and Carroll Inlet. Where full bench cut, endhaul material where slopes are too steep to hold material. Mitigate effects of sidecast and landing area slash, within 30 feet of road shoulders, by endhauling slash to a nonimpacting area, cover with soil and shape to natural contours. Locate and design rockpits to minimize visual impacts from saltwater viewpoints by retaining screen trees, and/or angling cut opening away from view and minimizing back wall heights. WEA 2/23/98
as located:

SILVICULTURE as planned: No concerns. CT 3/11/98
as located:

SOILS / WATERSHED as planned:

Avoid the placement of fill material or the sidecasting of waste material into wetlands (BMP 14.19). Erosion control seeding of cutbanks and fillslopes should be implemented as soon as possible (BMPs 12.17 and 14.8) following construction and reconstruction..

as located:

TIMBER/LOGGING SYSTEM/ADMINISTRATION as planned:No currently identified concerns AMG 3/11/98
as located:

WILDLIFE as planned: No wildlife mitigation.
as located:

Ranger's Signature

Date

Road Data Card

Road Number: 8435000

Aerial Photo Year: 91

Line:




Map Number: KTN B4 NW

Photo Number: 1390-48

Scale: 1 inch = 2640 feet









Stream Classes

-  Class 1 Streams
-  Class 2 Streams
-  Class 3 Streams

Roads





-  Temp Spur
-  Existing Road
-  Proposed Road

Wetlands

-  High Value Wetlands
-  Other Wetlands
-  40' Contours
-  Lakes
-  Proposed Units
-  Shoreline

2 inches = 1 mile



-  Fish Passage Provided
-  Fish Passage Failure
-  Rock Pit
-  Existing LTF

Road Data Card

Road Number: 8435070	ROD Road Number:	M.P.: 0.0	To M.P.: 0.4
Planned Length (miles): 0.4	Actual Length (miles):	New or Reconstruct:	reconstruction
Unit(s) Accessed: 174	Road Locator:		

ROAD MANAGEMENT OBJECTIVES

Functional Class: L	Traffic Service Level: D	Highway Safety Act Number:
Design Vehicle: LT	Critical Vehicle: LT	Intended Purpose and Use: Silvicultural
Maintain Level: Active Sale 2	Post Sale 1	AFRPR STATUS: Closed
Management Strategy (Encourage, Accept, Discourage, Eliminate or Prohibit): Eliminate		Closure Device: Barrier
Other Considerations: Close road (Obliterate)		Erosion Control: Water Bar

CULTURAL RESOURCES as planned: No Cultural Concerns JTA 2/5/98
as located: No Cultural Concerns JTA 2/5/98

ENGINEERING/ROADS

Recon/Location Narrative/Design Considerations (major drainages, road grades, future access, etc.):

Planned vs Implemented (describe changes and rational):

Rock Source(s) Location and Special Mitigation: No special concerns. Pits located as shown on map.

FISH HABITAT

No fisheries concerns.

Stream Crossings As Planned (0 - Class I 0 - Class II 0 - Class III):

Stream Crossings As Located (Class I Class II Class III):

Cataloged Stream Crossings As Located:

GEOLOGY/KARST as planned: No concerns.

as located:

LANDS/MINERALS as planned: No concerns.

as located:

RECREATION/VISUALS as planned: No concerns.

as located:

SILVICULTURE as planned: No concerns. CT 3/11/98

as located:

SOILS / WATERSHED as planned:

Avoid the placement of fill material or the sidecasting of waste material into wetlands (BMP 14.19). Erosion control seeding of cutbanks and fillslopes should be implemented as soon as possible (BMPs 12.17 and 14.8) following reconstruction..

as located:

TIMBER/LOGGING SYSTEM/ADMINISTRATION as planned:No currently identified concerns AMG 3/11/98

as located:

WILDLIFE as planned: No wildlife mitigation.

as located:

Ranger's Signature

Date

Road Data Card

Road Number: 8435070

Aerial Photo Year: 91

Line:

Map Number: KTN B4 NW

Photo Number: 1390-49

Scale: 1 inch = 1320 feet



Stream Classes

- Class 1 Streams
- Class 2 Streams
- Class 3 Streams

Roads

- Temp Spur
- Existing Road
- Proposed Road

Wetlands

- High Value Wetlands
- Other Wetlands
- 40' Contours
- Lakes
- Proposed Units
- Shoreline

4 inches = 1 mile



- Fish Passage Provided
- Fish Passage Failure
- Rock Pit
- Existing LTF

Road Data Card

Road Number: 8437000	ROD Road Number: 8437000	M.P.: 0.0	To M.P.: 3.0
Planned Length (miles): 3.0	Actual Length (miles):	New or Reconstruct:	new const
Unit(s) Accessed: 165,166,168	Road Locator:		

ROAD MANAGEMENT OBJECTIVES

Functional Class: Local	Traffic Service Level: D	Highway Safety Act Number: NO
Design Vehicle: LT	Critical Vehicle: LT	Intended Purpose and Use: Silvicultural
Maintain Level: Active Sale 2 Post Sale 1	AFRPR STATUS: Inactive	Closure Device: Barrier
Management Strategy (Encourage, Accept, Discourage, Eliminate or Prohibit): Eliminate		Erosion Control: water bar
Other Considerations:		

CULTURAL RESOURCES as planned: No Cultural Concerns JTA 2/5/98
as located: No Cultural Concerns JTA 2/5/98

ENGINEERING/ROADS

Recon/Location Narrative/Design Considerations (major drainages, road grades, future access, etc.): Portions of this road are on steep or unstable soils, see Soils section for mitigation measures and/or restrictions.

Planned vs Implemented (describe changes and rational):

Rock Source(s) Location and Special Mitigation: No special concerns. Pits located as shown on map.

FISH HABITAT

Fish passage is required on all Class II stream crossings (BMP 14.17). Stream surveys completed in 1996 verified the presence of resident salmonids on Class II streams and Class I habitat located below proposed streamcrossings. Timing restrictions (June 1- August) will apply on Class II streams that flow directly into Class I Anadromous streams (BMP 14.6).. Timing restrictions may apply for some Class III streams after road is inspected by District Biologist.

Stream Crossings As Planned (0- Class I 2- Class II 3- Class III):

Stream Crossings As Located (Class I Class II Class III):

Cataloged Stream Crossings As Located:

GEOLOGY/KARST as planned: High landslide potential along some short segments of this road. See Soils/Watershed for mitigation measures.
as located:

LANDS/MINERALS as planned: No concerns.
as located:

RECREATION/VISUALS as planned: Along portions of road visible from Thorne Arm. Where full bench cut, endhaul material where slopes are too steep to hold material. Mitigate effects of sidecast and landing area slash, within 30 feet of road shoulders, by endhauling slash to a nonimpacting area, cover with soil and shape to natural contours. Locate and design rockpits to minimize visual impacts from saltwater viewpoints by retaining screen trees, and/or angling cut opening away from view and minimizing back wall heights. WEA 2/23/98
as located:

SILVICULTURE as planned: No concerns. CT 3/11/98
as located:

SOILS / WATERSHED as planned:

The 8437000 road is located on areas of high landslide potential (MMI=3) soils (BMP 13.5). Road construction on these steep, potentially unstable slopes may require full-bench design (BMP 14.7). Avoid placing fill on high landslide potential slopes (BMP 14.7). Avoid side-casting and end-haul waste material (BMP 14.7). Dispose of waste material on a stable site (BMP 14.19). Limit blasting for road construction when the soil is saturated (BMP 14.6). The 8437000 road is located to avoid wetlands to the extent practicable (BMPs 12.5 and 14.2). The southern sections of this road segment cross low value forested wetlands and scrub-shrub muskeg.. Use overlay road construction on wetlands and minimize side ditching, where practicable, to minimize the effects upon groundwater flow (BMP 14.3). Provide cross drains where needed to provide for the passage of surface water and aquatic organisms (BMP 12.5). Avoid the placement of fill material or the sidecasting of waste material into wetlands (BMP 14.19).

as located:

TIMBER/LOGGING SYSTEM/ADMINISTRATION as planned:No currently identified concerns AMG 3/11/98
as located:

WILDLIFE as planned: Road is within 0.5 miles of bald eagle nest. No blasting within 0.5 miles of eagle nest 3/1 -5/31. If nest is active, no blasting within 0.5 miles of nest 6/1 - 8/31.
as located:

Ranger's Signature

Date

Road Data Card

Road Number: 8437000

Aerial Photo Year: 91

Map Number: KTN B4 NW

Photo Number: 1390-73

Scale: 1 inch = 1320 feet



Stream Classes

- Class 1 Streams
- Class 2 Streams
- Class 3 Streams

Roads

- Temp Spur
- Existing Road
- Proposed Road

Wetlands

- High Value Wetlands
- Other Wetlands
- 40' Contours
- Lakes
- Proposed Units
- Shoreline

4 inches = 1 mile



- Fish Passage Provided
- Fish Passage Failure
- Rock Pit
- Existing LTF

Road Data Card

Road Number: 8437200	ROD Road Number:	M.P. : 0.0	To M.P. : 0.40
Planned Length (miles): 0.40	Actual Length (miles):	New or Reconstruct:	new construction
Unit(s) Accessed: 166	Road Locator:		

ROAD MANAGEMENT OBJECTIVES

Functional Class: L	Traffic Service Level: D	Highway Safety Act Number:
Design Vehicle: LT	Critical Vehicle: LT	Intended Purpose and Use: Silvicultural
Maintain Level: Active Sale 2	Post Sale 1	AFRPR STATUS: Close
Management Strategy (Encourage, Accept, Discourage, Eliminate or Prohibit): Eliminate		Closure Device: Barrier
Other Considerations: Close road (Obliterate)		Erosion Control: Water Bar

CULTURAL RESOURCES as planned: No Cultural Concerns JTA 2/5/98
as located: No Cultural Concerns JTA 2/5/98

ENGINEERING/ROADS

Recon/Location Narrative/Design Considerations (major drainages, road grades, future access, etc.): No significant areas of steep slopes, >67%, were crossed on this location.

Planned vs Implemented (describe changes and rational):

Rock Source(s) Location and Special Mitigation: No special concerns. Pits located as shown on map.

FISH HABITAT

No fisheries concerns

Stream Crossings As Planned (0 - Class I 0 - Class II 0 - Class III):

Stream Crossings As Located (Class I Class II Class III):

Cataloged Stream Crossings As Located:

GEOLOGY/KARST as planned: No concerns.

as located:

LANDS/MINERALS as planned: No concerns.

as located:

RECREATION/VISUALS as planned: No concerns.

as located:

SILVICULTURE as planned: No concerns. CT 3/11/98

as located:

SOILS / WATERSHED as planned:

The 8437200 road is located to avoid wetlands and steep, potentially unstable slopes to the extent practicable (BMPs 12.5 and 14.2). Two short sections of this road segment is located on forested wetlands. Use overlay road construction on wetlands and minimize side ditching, where practicable, to minimize the effects upon groundwater flow (BMP 14.3). Provide cross drains where needed to provide for the passage of surface water and aquatic organisms (BMP 12.5). Avoid the placement of fill material or the sidecasting of waste material into wetlands (BMP 14.19). Erosion control seeding of cutbanks and fillslopes should be implemented as soon as possible (BMPs 12.17 and 14.8) following construction..

as located:

TIMBER/LOGGING SYSTEM/ADMINISTRATION as planned:No currently identified concerns AMG 3/11/98

as located:

WILDLIFE as planned: No wildlife mitigation.

as located:

Ranger's Signature

Date

Road Data Card

Road Number: 8437200

Aerial Photo

Year: 91

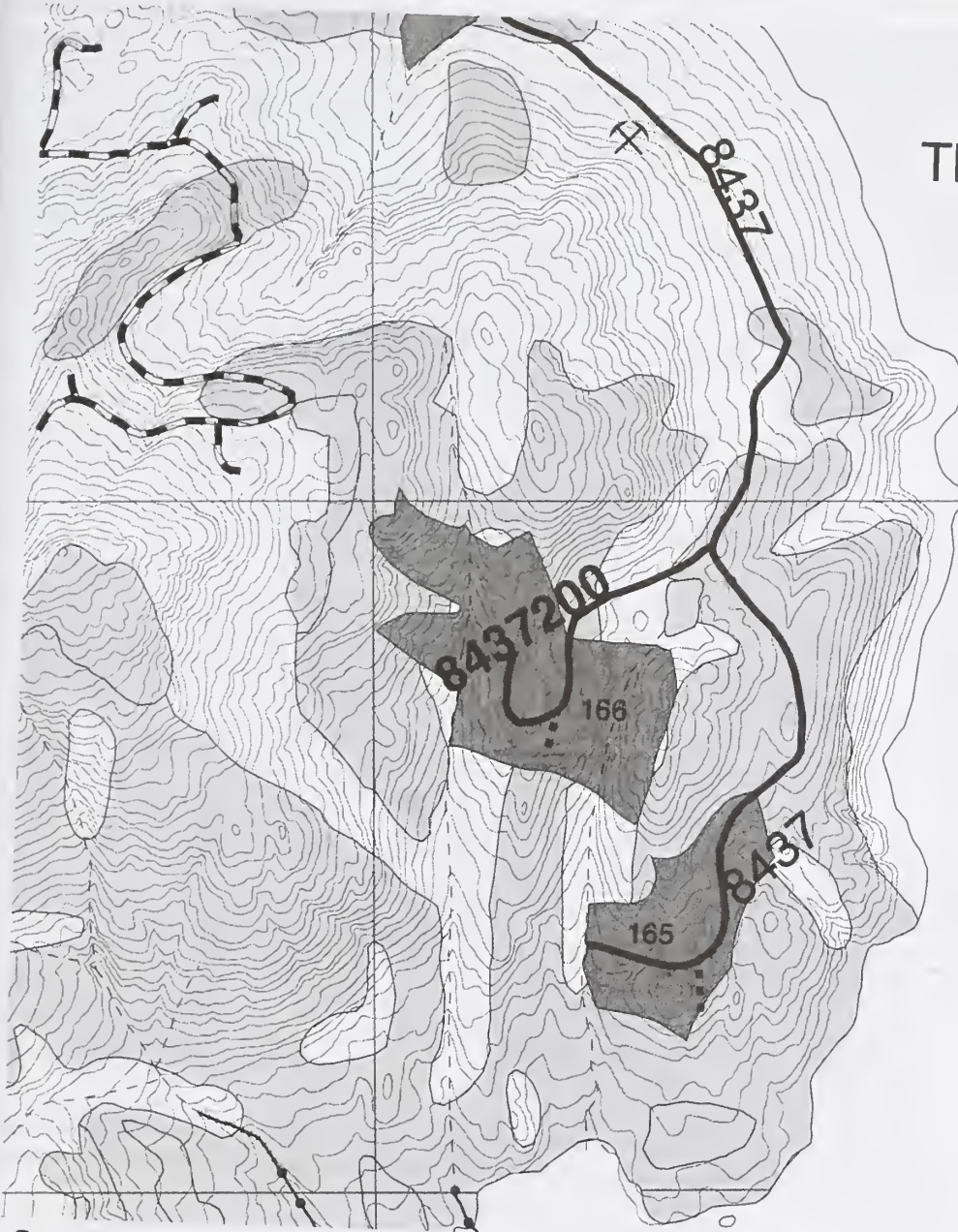
Line:

Map Number: KTN B4 NW

Photo Number: 1390-73

Scale: 1 inch = 1320 feet

Thorne Arm



Stream Classes

- Class 1 Streams
- Class 2 Streams
- Class 3 Streams

Roads

- Temp Spur
- Existing Road
- Proposed Road

Wetlands

- High Value Wetlands
- Other Wetlands
- 40' Contours
- Lakes
- Proposed Units
- Shoreline

4 inches = 1 mile



- Fish Passage Provided
- Fish Passage Failure
- Rock Pit
- Existing LTF

Road Data Card

Road Number: 8440000	ROD Road Number: 8440	M.P.: 0.0	To M.P.: 3.54
Planned Length (miles):	Actual Length (miles):	New or Reconstruct:	reconstruction
Unit(s) Accessed: Numerous	Road Locator: existing		

ROAD MANAGEMENT OBJECTIVES

Functional Class: Local	Traffic Service Level: D	Highway Safety Act Number: NO
Design Vehicle: LT	Critical Vehicle: LT	Intended Purpose and Use: Silvicultural
Maintain Level: Active Sale 2 Post Sale 1	AFRPR Status: Active	Closure Device: None
Management Strategy (Encourage, Accept, Discourage, Eliminate or Prohibit): Accept		Erosion Control: Water Bar
Other Considerations:		

CULTURAL RESOURCES as planned: No Cultural Concerns JTA 2/5/98
as located: No Cultural Concerns JTA 2/5/98

ENGINEERING/ROADS

Recon/Location Narrative/Design Considerations (major drainages, road grades, future access, etc.): No major reconstruction planned, prehaul and post haul maintenance will accommodate maintenance needs. One fish stream culvert(existing) to be installed to provide passage per 1997 road condition survey. See appendix E.

Planned vs Implemented (describe changes and rational):

Rock Source(s) Location and Special Mitigation: No special concerns. Pits located as shown on map.

FISH HABITAT

Road Condition surveys completed in 1997 identified one fish passage failure identified on a 36" cnp at milepost 2.16 (BMP 11.6). This streamcrossing is scheduled for culvert replacement in 1998 (BMP 14.2 and 14.17). All instream maintenance will be permitted between June 15 - August 7 (BMP 14.6). Due to the 8440 road's close proximity to Painted Creek, annual culvert inspections on this road is recommended (BMP 11.6).

Stream Crossings As Planned (1 - Class I 0 - Class II 0 - Class III):

Stream Crossings As Located (Class I Class II Class III):

Cataloged Stream Crossings As Located:

GEOLOGY/KARST as planned: No concerns.
as located:

LANDS/MINERALS as planned: No concerns.
as located:

RECREATION/VISUALS as planned: No concerns.
as located:

SILVICULTURE as planned: No concerns. CT 3/11/98
as located:

SOILS / WATERSHED as planned:

Avoid the placement of fill material or the side-casting of waste material into wetlands (BMP 14.19). Erosion control seeding of cutbanks and fill-slopes should be implemented as soon as possible (BMPs 12.17, 14.8) following reconstruction.

as located:

TIMBER/LOGGING SYSTEM/ADMINISTRATION as planned: No currently identified concerns AMG 3/11/98
as located:

WILDLIFE as planned: No wildlife mitigation.
as located:

Ranger's Signature

Date

Road Data Card

Road Number: 8440000

Aerial Photo Year: 91

Line:

Map Number: KTN B4 NW

Photo Number: 1390-

Scale: 1 inch = 2640 feet



Stream Classes

- Class 1 Streams
- Class 2 Streams
- Class 3 Streams

Roads

- Temp Spur
- Existing Road
- Proposed Road

Wetlands

- High Value Wetlands
- Other Wetlands
- 40' Contours
- Lakes
- Proposed Units
- Shoreline

2 inches = 1 mile



- Fish Passage Provided
- Fish Passage Failure
- Rock Pit
- Existing LTF

Road Data Card

Road Number: 8440100	ROD Road Number: 8440100	M.P.: 0.0	To M.P.: 3.04
Planned Length (miles): reconst 2.04 const. 1.00	Actual Length (miles):	New or Reconstruct:	reconst. and new const
Unit(s) Accessed: 57, 59	Road Locator: existing		

ROAD MANAGEMENT OBJECTIVES

Functional Class: Local	Traffic Service Level: D	Highway Safety Act Number: NO
Design Vehicle: LT	Critical Vehicle: LT	Intended Purpose and Use: Silvicultural
Maintain Level: Active Sale 2 Post Sale 1	AFRPR STATUS: Closed	Closure Device: Barrier
Management Strategy (Encourage, Accept, Discourage, Eliminate or Prohibit): Eliminate		Erosion Control: Water Bar
Other Considerations: Close road mile post 1.5 (approximately) remove all protected stream culverts beyond closure; water bar.		

CULTURAL RESOURCES as planned: No Cultural Concerns JTA 2/5/98
as located: No Cultural Concerns JTA 2/5/98

ENGINEERING/ROADS

Recon/Location Narrative/Design Considerations (major drainages, road grades, future access, etc.): Portions of this location are on steep ground or have unstable soils, see Soils section for mitigation and/or restrictions.

Planned vs Implemented (describe changes and rational):

Rock Source(s) Location and Special Mitigation: No special concerns. Pits located as shown on map.

FISH HABITAT

Existing Road- Road Condition Survey (See Appendix E) completed in 1997 verifies the 8440100 existing road does not have any critical maintenance concerns present at this time (BMP 11.6).

Proposed Road- No fisheries concerns have been identified during the planning phase for the one mile of proposed road. Additional reconnaissance is required after final road location is completed. All Class III streams have cnp diameters less than 1200mm.

Stream Crossings As Planned (0 - Class I 0 - Class II 2 - Class III):

Stream Crossings As Located (Class I Class II Class III):

Cataloged Stream Crossings As Located:

GEOLOGY/KARST as planned: High landslide potential. See Soils/Watershed for mitigation measures.
as located:

LANDS/MINERALS as planned: No concerns.
as located:

RECREATION/VISUALS as planned: No concerns.
as located:

SILVICULTURE as planned: No concerns. CT 3/11/98
as located:

SOILS / WATERSHED as planned:

The 8440100 road is located on areas of high landslide potential (MMI=3) soils (BMP 13.5). Road construction on these steep, potentially unstable slopes may require full-bench design (BMP 14.7). Avoid placing fill on high landslide potential slopes (BMP 14.7). Avoid side-casting and end-haul waste material (BMP 14.7). Dispose of waste material on a stable site (BMP 14.19). Limit blasting for road construction when the soil is saturated (BMP 14.6). This road segment is located to avoid wetlands (BMPs 12.5, 14.2). Erosion control seeding of cutbanks and fillslopes should be implemented as soon as possible (BMPs 12.17, 14.8) following construction and reconstruction.

as located:

TIMBER/LOGGING SYSTEM/ADMINISTRATION as planned:No currently identified concerns AMG 3/11/98
as located:

WILDLIFE as planned: No wildlife mitigation.
as located:

Ranger's Signature

Date

Road Data Card

Road Number: 8440100

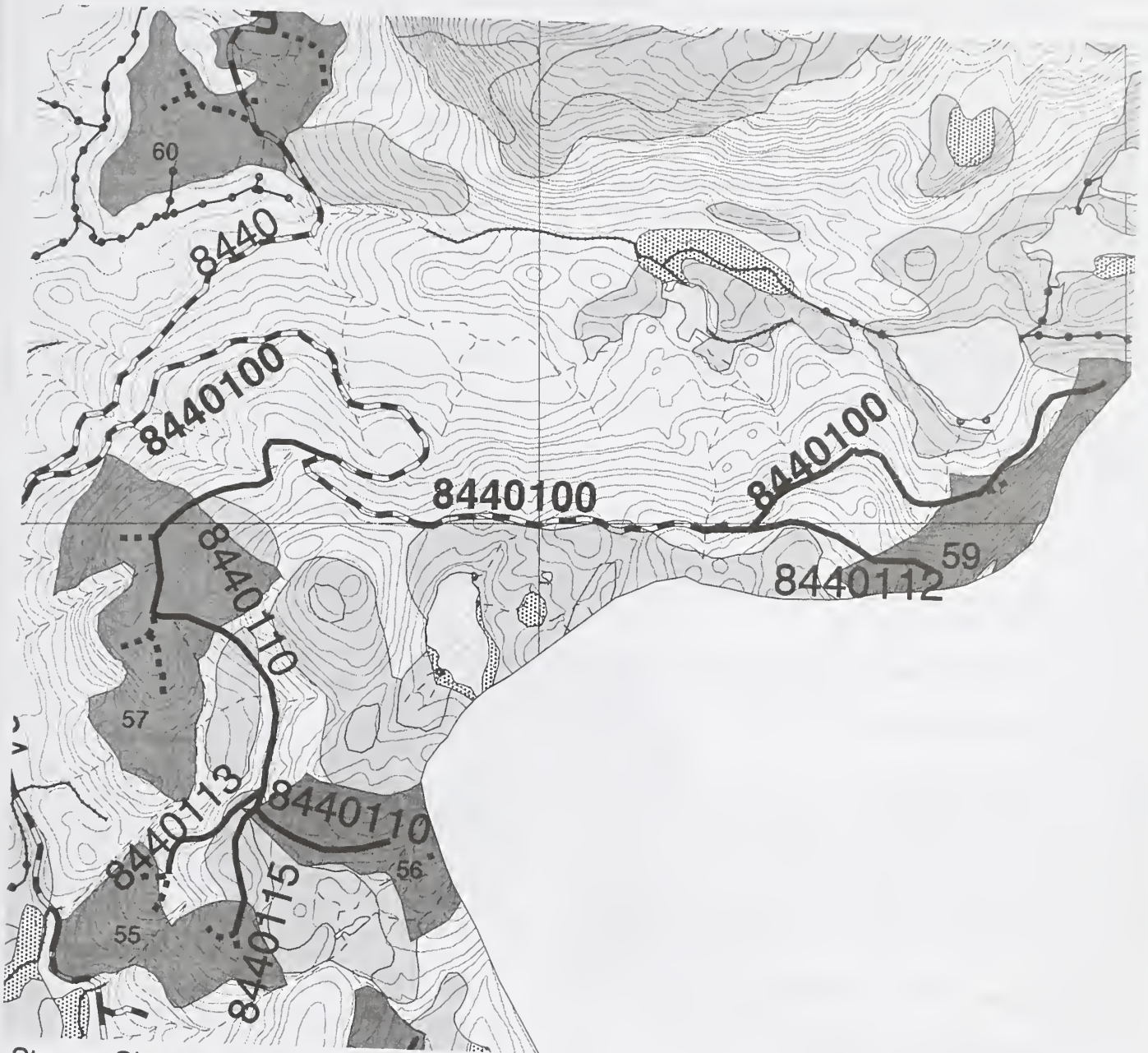
Aerial Photo Year: 91

Line:

Map Number: KTN B4 NW

Photo Number: 1390-148

Scale: 1 inch = 1320 feet



Stream Classes

- Class 1 Streams
- Class 2 Streams
- Class 3 Streams

Roads

- Temp Spur
- Existing Road
- Proposed Road

Wetlands

- High Value Wetlands
- Other Wetlands
- 40' Contours
- Lakes
- Proposed Units
- Shoreline

4 inches = 1 mile



- Fish Passage Provided
- Fish Passage Failure
- Rock Pit
- Existing LTF

Road Data Card

Road Number: 8440110	ROD Road Number: 8440110	M.P.: 0.0	To M.P.: 0.30
Planned Length (miles): 0.30	Actual Length (miles):	New or Reconstruct:	new const
Unit(s) Accessed: 55,56,57	Road Locator:		

ROAD MANAGEMENT OBJECTIVES

Functional Class: Local	Traffic Service Level: D	Highway Safety Act Number: NO
Design Vehicle: LT	Critical Vehicle: LT	Intended Purpose and Use: Silvicultural
Maintain Level: Active Sale 2 Post Sale 1	AFRPR Status: Close	Closure Device: Barrier
Management Strategy (Encourage, Accept, Discourage, Eliminate or Prohibit): Eliminate		Erosion Control: Water Bar
Other Considerations: Close (obliterate)		

CULTURAL RESOURCES as planned: No Cultural Concerns JTA 2/5/98
as located: No Cultural Concerns JTA 2/5/98

ENGINEERING/ROADS

Recon/Location Narrative/Design Considerations (major drainages, road grades, future access, etc.): There are portions of this location on steep or unstable soils, see Soils section for mitigation and/or restrictions on construction activities.

Planned vs Implemented (describe changes and rational):

Rock Source(s) Location and Special Mitigation: No special concerns. Pits located as shown on map.

FISH HABITAT

No fisheries concerns have been identified during the planning phase. Mitigation may be necessary on some Class III streams after final road location is reviewed by District Biologist.

Stream Crossings As Planned (0 - Class I 0 - Class II 0 - Class III):

Stream Crossings As Located (Class I Class II Class III):

Cataloged Stream Crossings As Located:

GEOLOGY/KARST as planned: High landslide potential. See Soils/Watershed section for mitigation measures.
as located:

LANDS/MINERALS as planned: The 8440110 road is located near the boundary of the Misty Fiords National Monument Wilderness. A boundary line survey will be required before this road is surveyed.
as located:

RECREATION/VISUALS as planned: The 8440110 road provides potential access to the Misty Fiords National Monument Wilderness.
as located:

SILVICULTURE as planned: No concerns. CT 3/11/98
as located:

SOILS / WATERSHED as planned:

The 8440110 road location includes areas of high landslide potential (MMI=3) soils (BMP 13.5). Road construction on these steep, potentially unstable slopes may require full-bench design (BMP 14.7). Avoid placing fill on high landslide potential slopes (BMP 14.7). Avoid side-casting and end-haul waste material (BMP 14.7). Dispose of waste material on a stable site (BMP 14.19). Limit blasting for road construction when the soil is saturated (BMP 14.6). The 8440110 road is located on some low value forested wetlands and scrub-shrub muskeg (BMPs 12.5 and 14.2). There are no practicable alternative road locations on nonwetlands to access Harvest Units 55, 56 and 57. Use overlay road construction on wetlands and minimize side ditching, where practicable, to minimize the effects upon groundwater flow (BMP 14.3). Provide cross drains where needed to provide for the passage of surface water and aquatic organisms (BMP 12.5). Avoid the placement of fill material or the side-casting of waste material into wetlands (BMP 14.19). Erosion control seeding of cut-banks and fill-slopes should be implemented as soon as possible (BMPs 12.17, 14.8) following construction and reconstruction.

as located:

TIMBER/LOGGING SYSTEM/ADMINISTRATION as planned:No currently identified concerns AMG 3/11/98
as located:

WILDLIFE as planned: No wildlife mitigation.
as located:

Ranger's Signature

Date

Road Data Card

Road Number: 8440110

Map Number: KTN B4 NW

Scale: 1 inch = 1320 feet

Aerial Photo Year: 91

Line:

Photo Number: 1390-108



Stream Classes

- Class 1 Streams
- Class 2 Streams
- Class 3 Streams

Roads

- Temp Spur
- Existing Road
- Proposed Road

Wetlands

- High Value Wetlands
- Other Wetlands
- 40' Contours
- Lakes
- Proposed Units
- Shoreline

4 inches = 1 mile



- Fish Passage Provided
- Fish Passage Failure
- Rock Pit
- Existing LTF

Road Data Card

Road Number: 8440112	ROD Road Number: 8440112	M.P.: 0.0	To M.P.: 0.30
Planned Length (miles): 0.30	Actual Length (miles):	New or Reconstruct:	new const
Unit(s) Accessed: 59	Road Locator:		

ROAD MANAGEMENT OBJECTIVES

Functional Class: Local	Traffic Service Level: D	Highway Safety Act Number: NO
Design Vehicle: LT	Critical Vehicle: LT	Intended Purpose and Use: Silvicultural
Maintain Level: Active Sale 2 Post Sale 1	AFRPR Status: Close	Closure Device: Barrier
Management Strategy (Encourage, Accept, Discourage, Eliminate or Prohibit): Eliminate		Erosion Control: Water Bar
Other Considerations: Close (obliterate)		

CULTURAL RESOURCES as planned: as located:

ENGINEERING/ROADS

Recon/Location Narrative/Design Considerations (major drainages, road grades, future access, etc.): Portions of this location are on steep or unstable soils, see the Soils section for mitigation and/or restrictions on construction/design.

Planned vs Implemented (describe changes and rationale):

Rock Source(s) Location and Special Mitigation: No special concerns. Pits located as shown on map.

FISH HABITAT

No fisheries concerns have been identified during the planning phase.

Stream Crossings As Planned (0 - Class I 0 - Class II 0 - Class III):

Stream Crossings As Located (Class I Class II Class III):

Cataloged Stream Crossings As Located:

GEOLOGY/KARST as planned: High landslide potential. See Soils/Watershed section for mitigation measures
as located:

LANDS/MINERALS as planned: The 8440112 road is located near the boundary of the Misty Fiords National Monument Wilderness. A boundary line survey will be required before this road is surveyed.

as located:

RECREATION/VISUALS as planned: The 8440112 road provides potential access to the Misty Fiords National Monument Wilderness. Potential for new trailheads.

as located:

SILVICULTURE as planned: No concerns. CT 3/11/98

as located:

SOILS / WATERSHED as planned:

The 8440112 road location includes areas of high landslide potential (MMI=3) soils (BMP 13.5). Road construction on these steep, potentially unstable slopes may require full-bench design (BMP 14.7). Avoid placing fill on high landslide potential slopes (BMP 14.7). Avoid side-casting and end-haul waste material (BMP 14.7). Dispose of waste material on a stable site (BMP 14.19). Limit blasting for road construction when the soil is saturated (BMP 14.6). The 8440110 road avoids wetlands (BMPs 12.5 and 14.2). Erosion control seeding of cutbanks and fill-slopes should be implemented as soon as possible (BMPs 12.17, 14.8) following construction.

as located:

TIMBER/LOGGING SYSTEM/ADMINISTRATION as planned: No currently identified concerns AMG 3/11/98

as located:

WILDLIFE as planned: No wildlife mitigation.

as located:

Ranger's Signature

Date

Road Data Card

Road Number: 8440112

Aerial Photo Year: 91

Line:

Map Number: KTN B4 NW

Photo Number: 1390-148

Scale: 1 inch = 1320 feet



Stream Classes

- Class 1 Streams
- Class 2 Streams
- Class 3 Streams

Roads

- Temp Spur
- Existing Road
- Proposed Road

Wetlands

- High Value Wetlands
- Other Wetlands
- 40' Contours
- Lakes
- Proposed Units
- Shoreline

4 inches = 1 mile



- Fish Passage Provided
- Fish Passage Failure
- Rock Pit
- Existing LTF

Road Data Card

Road Number: 8440113	ROD Road Number: 8440113	M.P.: 0.0	To M.P.: 0.30
Planned Length (miles): 0.30	Actual Length (miles):	New or Reconstruct:	new const
Unit(s) Accessed: 55	Road Locator:		

ROAD MANAGEMENT OBJECTIVES

Functional Class: Local	Traffic Service Level: D	Highway Safety Act Number: NO
Design Vehicle: LT	Critical Vehicle: LT	Intended Purpose and Use: Silvicultural
Maintain Level: Active Sale 2 Post Sale 1	AFRPR Status: Closed	Closure Device: Barrier
Management Strategy (Encourage, Accept, Discourage, Eliminate or Prohibit): Eliminate		Erosion Control: Water Bar
Other Considerations: Close (obliterate)		

CULTURAL RESOURCES as planned: No Cultural Concerns JTA 2/5/98
as located: No Cultural Concerns JTA 2/5/98

ENGINEERING/ROADS

Recon/Location Narrative/Design Considerations (major drainages, road grades, future access, etc.): Portions of this road are on steep or unstable soils, see Soils section for mitigation and or restrictions on construction and design.

Planned vs Implemented (describe changes and rationale):

Rock Source(s) Location and Special Mitigation: No special concerns. Pits located as shown on map.

FISH HABITAT

No fisheries concerns have been identified during the planning phase.

Stream Crossings As Planned (0 -Class I 0 -Class II 0 -Class III):

Stream Crossings As Located (Class I Class II Class III):

Cataloged Stream Crossings As Located:

GEOLOGY/KARST as planned: High landslide potential areas. See **Soils/Watershed** section for mitigation measures.
as located:

LANDS/MINERALS as planned: No concerns.
as located:

RECREATION/VISUALS as planned: No concerns.
as located:

SILVICULTURE as planned: No concerns. CT 3/11/98
as located:

SOILS / WATERSHED as planned:

The 8440113 road location includes areas of high landslide potential (MMI=3) soils (BMP 13.5). Road construction on these steep, potentially unstable slopes may require full-bench design (BMP 14.7). Avoid placing fill on high landslide potential slopes (BMP 14.7). Avoid side-casting and end-haul waste material (BMP 14.7). Dispose of waste material on a stable site (BMP 14.19). Limit blasting for road construction when the soil is saturated (BMP 14.6). The 8440113 road is located on some low value forested wetlands and scrub-shrub muskeg (BMPs 12.5 and 14.2). There are no practicable alternative road locations on nonwetlands to access Harvest Unit 55. Use overlay road construction on wetlands and minimize side ditching, where practicable, to minimize the effects upon groundwater flow (BMP 14.3). Provide cross drains where needed to provide for the passage of surface water and aquatic organisms (BMP 12.5). Avoid the placement of fill material or the side-casting of waste material into wetlands (BMP 14.19). Erosion control seeding of cutbanks and fill-slopes should be implemented as soon as possible (BMPs 12.17, 14.8) following construction.

as located:

TIMBER/LOGGING SYSTEM/ADMINISTRATION as planned:No currently identified concerns AMG 3/11/98
as located:

WILDLIFE as planned: No wildlife mitigation.
as located:

Ranger's Signature

Date

Road Data Card

Road Number: 8440113

Aerial Photo

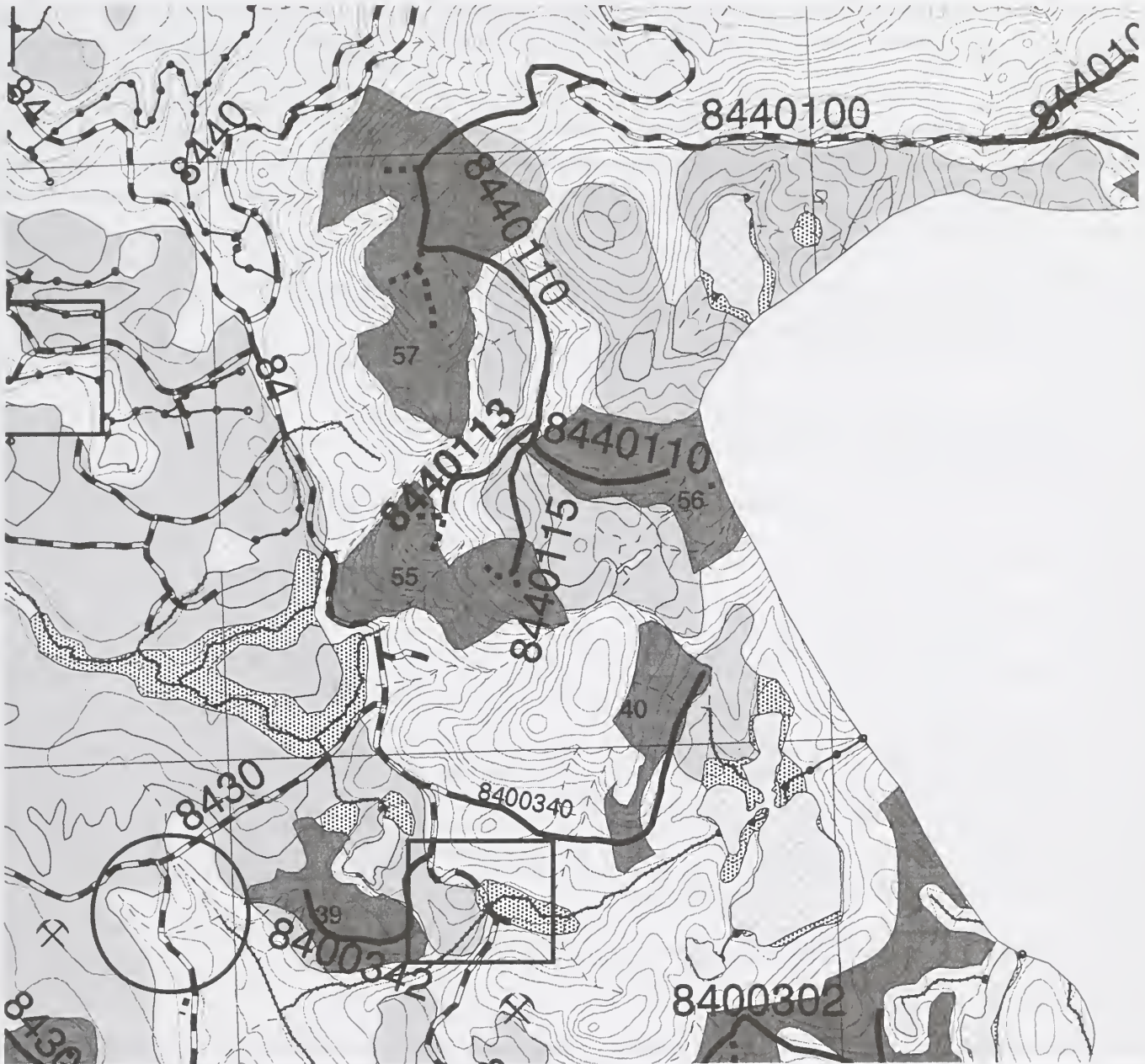
Year: 91

Line:

Map Number: KTN B4 NW

Photo Number: 1390-108

Scale: 1 inch = 1320 feet



Stream Classes

- Class 1 Streams
- Class 2 Streams
- Class 3 Streams

Roads

- Temp Spur
- Existing Road
- Proposed Road

Wetlands

- High Value Wetlands
- Other Wetlands
- 40' Contours
- Lakes
- Proposed Units
- Shoreline

4 inches = 1 mile



- Fish Passage Provided
- Fish Passage Failure
- Rock Pit
- Existing LTF

Road Data Card

Road Number: 8440115	ROD Road Number: 8440115	M.P.: 0.0	To M.P.: 0.30
Planned Length (miles): 0.30	Actual Length (miles):	New or Reconstruct:	new const
Unit(s) Accessed: 55	Road Locator:		

ROAD MANAGEMENT OBJECTIVES

Functional Class: Local	Traffic Service Level: D	Highway Safety Act Number: NO
Design Vehicle: LT	Critical Vehicle: LT	Intended Purpose and Use: Silvicultural
Maintain Level: Active Sale 2 Post Sale 1	AFRPR Status: Closed	Closure Device: Barrier
Management Strategy (Encourage, Accept, Discourage, Eliminate or Prohibit): Eliminate		Erosion Control: Water Bar
Other Considerations: Close (obliterate)		

CULTURAL RESOURCES as planned: No Cultural Concerns JTA 2/5/98
as located: No Cultural Concerns JTA 2/5/98

ENGINEERING/ROADS

Recon/Location Narrative/Design Considerations (major drainages, road grades, future access, etc.): Portions of this road are on steep or unstable soils, see Soils section for mitigation and or restrictions on construction and design.

Planned vs Implemented (describe changes and rational):

Rock Source(s) Location and Special Mitigation: No special concerns. Pits located as shown on map.

FISH HABITAT

No fisheries concerns have been identified during the planning phase.

Stream Crossings As Planned (0 -Class I 0 -Class II 0 -Class III):

Stream Crossings As Located (Class I Class II Class III):

Cataloged Stream Crossings As Located:

GEOLOGY/KARST as planned: High landslide potential areas. See Soils/Watershed section for mitigation measures.

as located:

LANDS/MINERALS as planned: No concerns.

as located:

RECREATION/VISUALS as planned: No concerns.

as located:

SILVICULTURE as planned: No concerns. CT 3/11/98

as located:

SOILS / WATERSHED as planned:

The 8440113 road location includes areas of high landslide potential (MMI=3) soils (BMP 13.5). Road construction on these steep, potentially unstable slopes may require full-bench design (BMP 14.7). Avoid placing fill on high landslide potential slopes (BMP 14.7). Avoid side-casting and end-haul waste material (BMP 14.7). Dispose of waste material on a stable site (BMP 14.19). Limit blasting for road construction when the soil is saturated (BMP 14.6). The 8440113 road is located on some low value forested wetlands and scrub-shrub muskeg (BMPs 12.5 and 14.2). There are no practicable alternative road locations on nonwetlands to access Harvest Unit 55. Use overlay road construction on wetlands and minimize side ditching, where practicable, to minimize the effects upon groundwater flow (BMP 14.3). Provide cross drains where needed to provide for the passage of surface water and aquatic organisms (BMP 12.5). Avoid the placement of fill material or the side-casting of waste material into wetlands (BMP 14.19). Erosion control seeding of cutbanks and fill-slopes should be implemented as soon as possible (BMPs 12.17, 14.8) following construction.

as located:

TIMBER/LOGGING SYSTEM/ADMINISTRATION as planned:No currently identified concerns AMG 3/11/98

as located:

WILDLIFE as planned: No wildlife mitigation.

as located:

Ranger's Signature

Date

Road Data Card

Road Number: 8440115

Aerial Photo

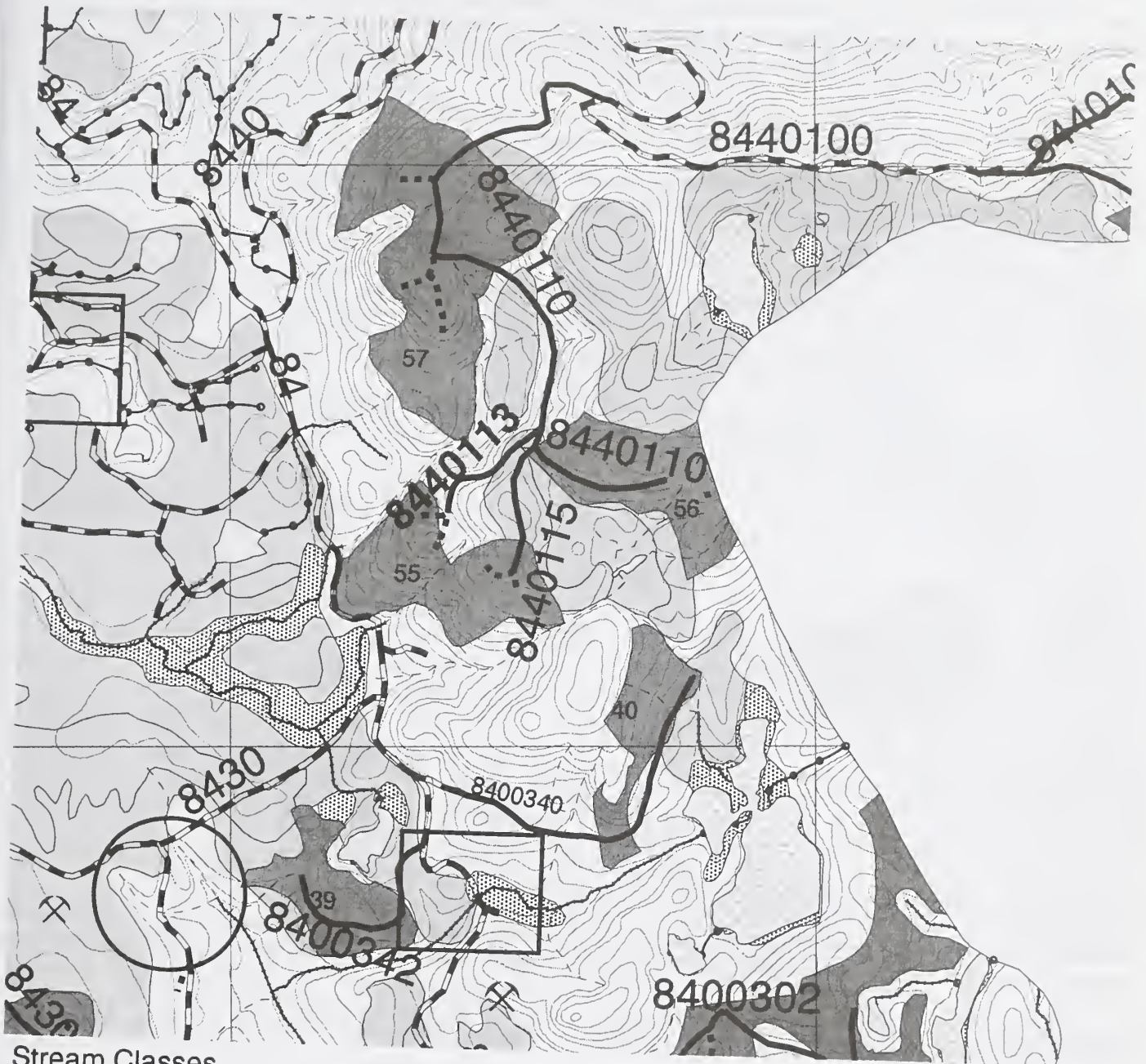
Year: 91

Line:

Map Number: KTN B4 NW

Photo Number: 1390-108

Scale: 1 inch = 1320 feet



Stream Classes

- Class 1 Streams
- Class 2 Streams
- Class 3 Streams

Roads

- Temp Spur
- Existing Road
- Proposed Road

Wetlands

- High Value Wetlands
- Other Wetlands
- 40' Contours
- Lakes
- Proposed Units
- Shoreline

4 inches = 1 mile



- Fish Passage Provided
- Fish Passage Failure
- Rock Pit
- Existing LTF

Road Data Card

Road Number: 8441000	ROD Road Number: 8441000	M.P.: 0.0	To M.P.: 1.40
Planned Length (miles): 1.40	Actual Length (miles):	New or Reconstruct:	reconst
Unit(s) Accessed: 72	Road Locator:		

ROAD MANAGEMENT OBJECTIVES

Functional Class: Local	Traffic Service Level: D	Highway Safety Act Number: NO
Design Vehicle: LT	Critical Vehicle: LT	Intended Purpose and Use: Silvicultural
Maintain Level: Active Sale 2 Post Sale 1	AFRPR Status: Inactive	Closure Device: Barrier
Management Strategy (Encourage, Accept, Discourage, Eliminate or Prohibit): Prohibit		Erosion Control: Water Bar
Other Considerations:		

CULTURAL RESOURCES as planned: No Cultural Concerns JTA 2/5/98
as located: No Cultural Concerns JTA 2/5/98

ENGINEERING/ROADS

Recon/Location Narrative/Design Considerations (major drainages, road grades, future access, etc.): No significant areas of steep slopes, >67%, were crossed on this location.

Planned vs Implemented (describe changes and rational):

Rock Source(s) Location and Special Mitigation: No special concerns. Pits located as shown on map.

FISH HABITAT

Road Condition Survey's completed in 1997 found no critical streamcrossings failures currently present on the 8441000 road (BMP 11.6). Recommend annual inspections of all the streamcrossings after completion of the Sea Level Project area.

Stream Crossings As Planned (Class I Class II Class III):

Stream Crossings As Located (Class I Class II Class III):

Cataloged Stream Crossings As Located:

GEOLOGY/KARST as planned: The 8441000 road is located in an area of low vulnerability karst. See the **Soils/Watershed** section for mitigation measures.
as located:

LANDS/MINERALS as planned: No concerns.
as located:

RECREATION/VISUALS as planned: No concerns.
as located:

SILVICULTURE as planned: No concerns. CT 3/11/98
as located:

SOILS / WATERSHED as planned:

Avoid the placement of fill material or the side-casting of waste material into wetlands (BMP 14.19) or karst features. Erosion control seeding of cutbanks and fill-slopes should be implemented as soon as possible (BMPs 12.17, 14.8) following reconstruction.

as located:

TIMBER/LOGGING SYSTEM/ADMINISTRATION as planned:No currently identified concerns AMG 3/11/98
as located:

WILDLIFE as planned: No wildlife mitigation.
as located:

Ranger's Signature

Date

Road Data Card

Road Number: 8441000

Aerial Photo

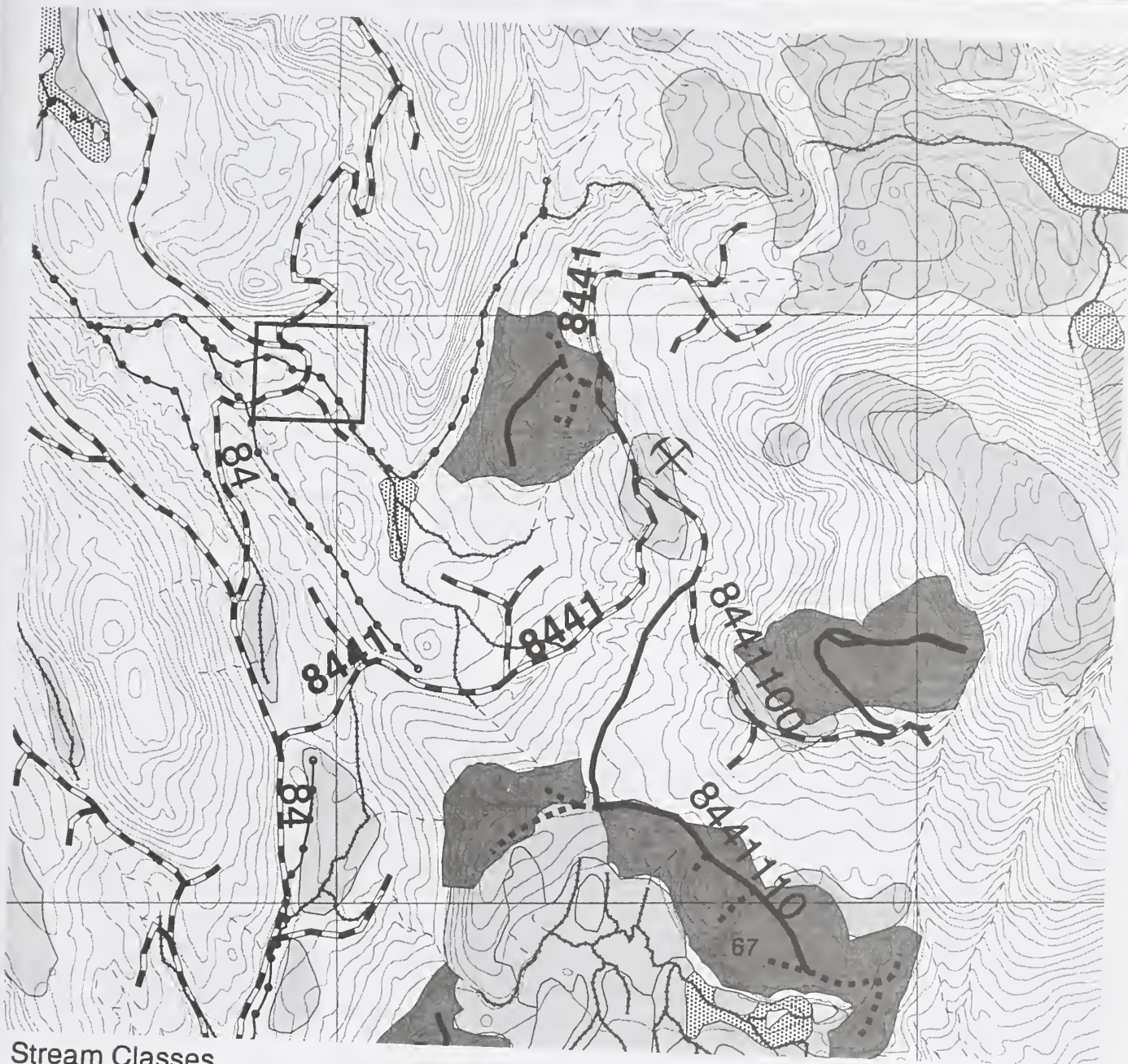
Year: 91

Line:

Map Number: KTN B4 NW

Photo Number: 1390-85

Scale: 1 inch = 1320 feet



Stream Classes

- Class 1 Streams
- Class 2 Streams
- Class 3 Streams

Roads

- Temp Spur
- Existing Road
- Proposed Road

Wetlands

- High Value Wetlands
- Other Wetlands
- 40' Contours
- Lakes
- Proposed Units
- Shoreline

4 inches = 1 mile



- Fish Passage Provided
- Fish Passage Failure
- Rock Pit
- Existing LTF

Road Data Card

Road Number: 8441100	ROD Road Number: 8441100	M.P.: 0.0	To M.P.: 1.00
Planned Length (miles): 1.00	Actual Length (miles):	New or Reconstruct:	reconst
Unit(s) Accessed: 71	Road Locator:		

ROAD MANAGEMENT OBJECTIVES

Functional Class: Local	Traffic Service Level: D	Highway Safety Act Number: NO
Design Vehicle: LT	Critical Vehicle: LT	Intended Purpose and Use: Silvicultural
Maintain Level: Active Sale 2 Post Sale 1	AFRPR Status: Closed	Closure Device: Barrier
Management Strategy (Encourage, Accept, Discourage, Eliminate or Prohibit): Eliminate		Erosion Control: Water Bar
Other Considerations:		

CULTURAL RESOURCES as planned: No Cultural Concerns JTA 2/5/98
as located: No Cultural Concerns JTA 2/5/98

ENGINEERING/ROADS

Recon/Location Narrative/Design Considerations (major drainages, road grades, future access, etc.):

Planned vs Implemented (describe changes and rationale):

Rock Source(s) Location and Special Mitigation: No special concerns. Pits located as shown on map.

FISH HABITAT

Road Condition Survey's completed in 1997 identified two 36" c/p's currently failing due 90% blockage on each of these culverts. Currently water is being diverted onto the road surface causing major damage. Maintenance on these two culverts is scheduled in 1998.

Stream Crossings As Planned (0 - Class I - 0 - Class II - 2 - Class III):

Stream Crossings As Located (Class I Class II Class III):

Cataloged Stream Crossings As Located:

GEOLOGY/KARST as planned: The 8441100 road is located in area of low vulnerability karst. Avoid the placement of fill material or the side-casting of waste material into karst features.

as located:

LANDS/MINERALS as planned: No concerns.

as located:

RECREATION/VISUALS as planned: No concerns.

as located:

SILVICULTURE as planned: No concerns. CT 3/11/98

as located:

SOILS / WATERSHED as planned:

The 8441100 road location includes areas of high landslide potential (MMI=3) soils (BMP 13.5). Road construction on these steep, potentially unstable slopes may require full-bench design (BMP 14.7). Avoid placing fill on high landslide potential slopes (BMP 14.7). Avoid side-casting and end-haul waste material (BMP 14.7). Dispose of waste material on a stable site (BMP 14.19). Limit blasting for road construction when the soil is saturated (BMP 14.6). The 8440113 road has been relocated to avoid low value forested wetlands (BMPs 12.5 and 14.2). Erosion control seeding of cutbanks and fill-slopes should be implemented as soon as possible (BMPs 12.17, 14.8) following construction.

as located:

TIMBER/LOGGING SYSTEM/ADMINISTRATION as planned: No currently identified concerns AMG 3/11/98

as located:

WILDLIFE as planned: No wildlife mitigation.

as located:

Ranger's Signature

Date

Road Data Card

Road Number: 8441100

Aerial Photo

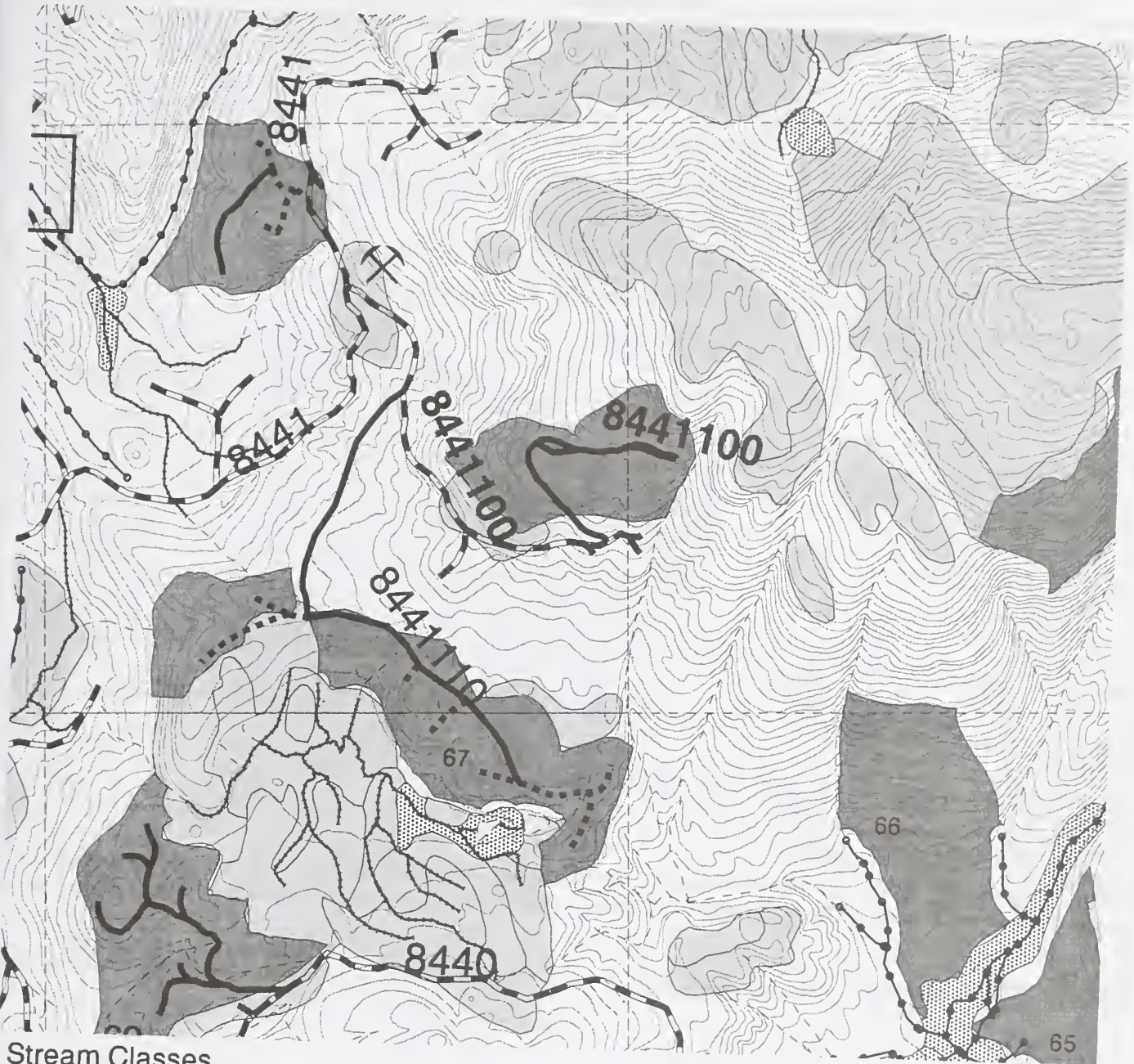
Year: 91

Line:

Map Number: KTN B4 NW

Photo Number: 1390-104

Scale: 1 inch = 1320 feet



Stream Classes

- Class 1 Streams
- Class 2 Streams
- Class 3 Streams

Roads

- Temp Spur
- Existing Road
- Proposed Road

Wetlands

- High Value Wetlands
- Other Wetlands
- 40' Contours
- Lakes
- Proposed Units
- Shoreline

4 inches = 1 mile



- Fish Passage Provided
- Fish Passage Failure
- Rock Pit
- Existing LTF

Road Data Card

Road Number: 8441110	ROD Road Number: 8441110	M.P.: 0.0	To M.P.: 1.00
Planned Length (miles): 1.00	Actual Length (miles):	New or Reconstruct:	new construction
Unit(s) Accessed: 71	Road Locator:		

ROAD MANAGEMENT OBJECTIVES

Functional Class: Local	Traffic Service Level: D	Highway Safety Act Number: NO
Design Vehicle: LT	Critical Vehicle: LT	Intended Purpose and Use: Silvicultural
Maintain Level: Active Sale 2 Post Sale 1	AFRPR Status: Closed	Closure Device: Barrier
Management Strategy (Encourage, Accept, Discourage, Eliminate or Prohibit): Eliminate		Erosion Control: Water Bar
Other Considerations: Close (obliterate)		

CULTURAL RESOURCES as planned: No Cultural Concerns JTA 2/5/98
as located: No Cultural Concerns JTA 2/5/98

ENGINEERING/ROADS

Recon/Location Narrative/Design Considerations (major drainages, road grades, future access, etc.):

Planned vs Implemented (describe changes and rational):

Rock Source(s) Location and Special Mitigation: No special concerns. Pits located as shown on map.

FISH HABITAT

No fisheries concerns have been identified during the planning phase. Mitigation may be necessary on some Class III streams after final road location is reviewed by District Biologist.

Stream Crossings As Planned (0 - Class I 0 - Class II 1 - Class III):

Stream Crossings As Located (Class I Class II Class III):

Cataloged Stream Crossings As Located:

GEOLOGY/KARST as planned:

as located:

LANDS/MINERALS as planned:

as located:

RECREATION/VISUALS as planned:

as located:

SILVICULTURE as planned: No concerns. CT 3/11/98

as located:

SOILS / WATERSHED as planned:

as located:

TIMBER/LOGGING SYSTEM/ADMINISTRATION as planned: No currently identified concerns AMG 3/11/98

as located:

WILDLIFE as planned: No wildlife mitigation.

as located:

Ranger's Signature

Date

Road Data Card

Road Number: 8441110

Aerial Photo

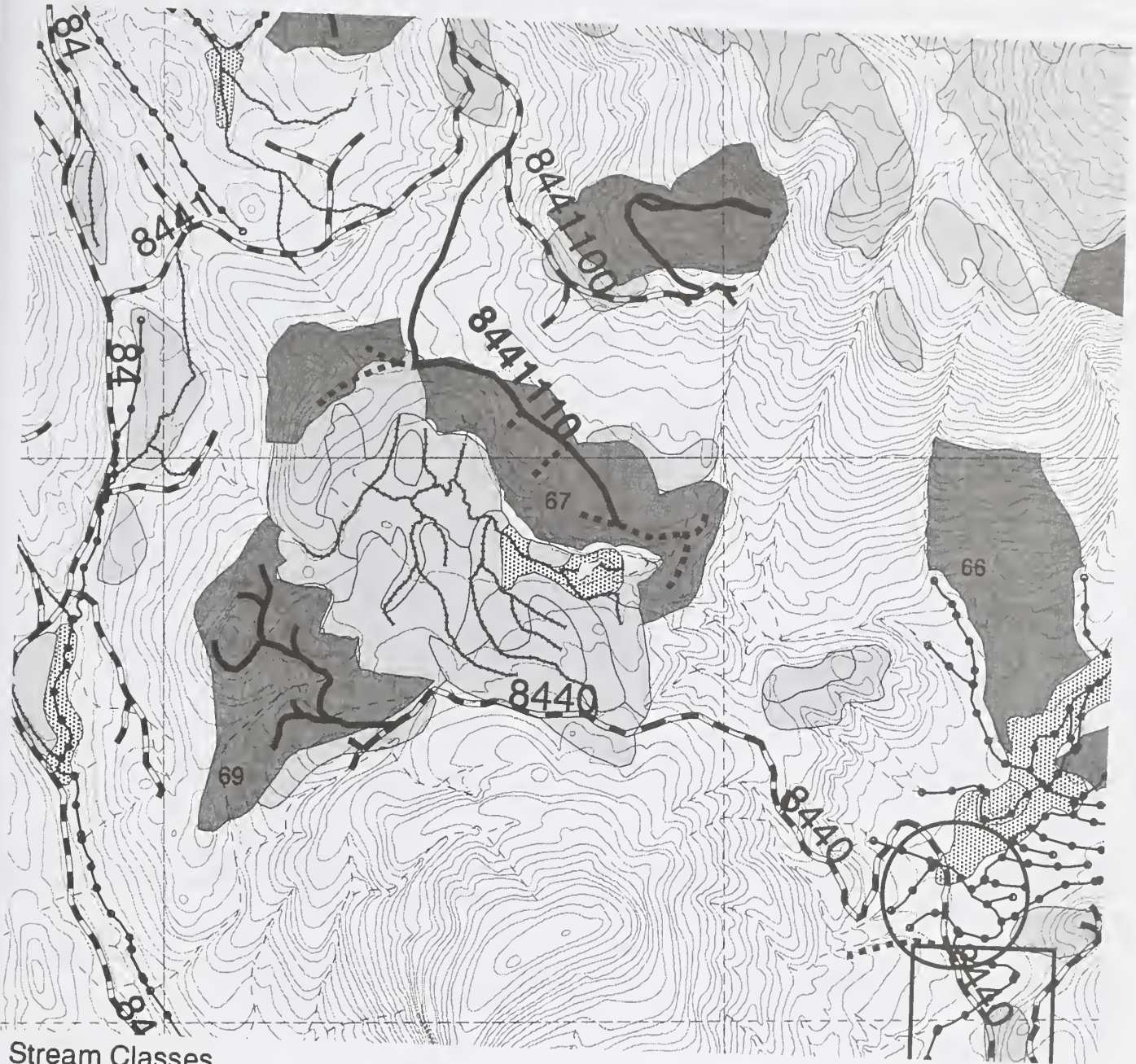
Year: 91

Line:

Map Number: KTN B4 NW

Photo Number: 1390-104

Scale: 1 inch = 1320 feet



Stream Classes

- Class 1 Streams
- Class 2 Streams
- Class 3 Streams

Roads

- Temp Spur
- Existing Road
- Proposed Road

Wetlands

- High Value Wetlands
- Other Wetlands
- 40' Contours
- Lakes
- Proposed Units
- Shoreline

4 inches = 1 mile



- Fish Passage Provided
- Fish Passage Failure
- Rock Pit
- Existing LTF

Road Data Card

Road Number: 8444000	ROD Road Number: 8444000	M.P.: 0.0	To M.P.: 4.34
Planned Length (miles): 3.14 reconst 1.20 const.	Actual Length (miles):	New or Reconstruct:	reconst. & new const.
Unit(s) Accessed:	Road Locator:		

ROAD MANAGEMENT OBJECTIVES

Functional Class: Local	Traffic Service Level: D	Highway Safety Act Number: NO
Design Vehicle: LT	Critical Vehicle: LT	Intended Purpose and Use: Silvicultural
Maintain Level: Active Sale 2 Post Sale 1	AFRPR Status: Inactive	Closure Device:
Management Strategy (Encourage, Accept, Discourage, Eliminate or Prohibit): Prohibit		Erosion Control: Water Bar
Other Considerations:		

CULTURAL RESOURCES as planned: No Cultural Concerns JTA 2/5/98
as located: No Cultural Concerns JTA 2/5/98

ENGINEERING/ROADS

Recon/Location Narrative/Design Considerations (major drainages, road grades, future access, etc.):

Planned vs Implemented (describe changes and rational):

Rock Source(s) Location and Special Mitigation: No special concerns. Pits located as shown on map.

FISH HABITAT

Road Condition Survey's completed in 1997 identified structural damage and blockage on cmp's which caused water diversion onto the road surface (BMP 11.6). Road maintenance to replace all the culvert currently failing is scheduled for 1998 (BMP 14.2).

Stream Crossings As Planned (0 - Class I 0 - Class II 3 - Class III):

Stream Crossings As Located (Class I Class II Class III):

Cataloged Stream Crossings As Located:

GEOLOGY/KARST as planned:

as located:

LANDS/MINERALS as planned:

as located:

RECREATION/VISUALS as planned:

as located:

SILVICULTURE as planned: No concerns. CT 3/11/98

as located:

SOILS / WATERSHED as planned:

as located:

TIMBER/LOGGING SYSTEM/ADMINISTRATION as planned: No currently identified concerns AMG 3/11/98

as located:

WILDLIFE as planned: No wildlife mitigation.

as located:

Ranger's Signature

Date

Road Data Card

Road Number: 8444000

Aerial Photo Year: 91

Map Number: KTN B4 NW

Line:

Photo Number:

1390-104

Scale: 1 inch = 1320 feet



Stream Classes

- Class 1 Streams
- Class 2 Streams
- Class 3 Streams

Roads

- Temp Spur
- Existing Road
- Proposed Road

Wetlands

- High Value Wetlands
- Other Wetlands
- 40' Contours
- Lakes
- Proposed Units
- Shoreline

2 inches = 1 mile



- Fish Passage Provided
- Fish Passage Failure
- Rock Pit
- Existing LTF

Road Data Card

Road Number: 8444100
Planned Length (miles): 0.50 reconst
Unit(s) Accessed: 82

ROD Road Number: 8444100
Actual Length (miles):
Road Locator:

M.P.: 0.0 To M.P.: 0.50
New or Reconstruct: reconstruction

ROAD MANAGEMENT OBJECTIVES

Functional Class: Local Traffic Service Level: D Highway Safety Act Number: NO
Design Vehicle: LT Critical Vehicle: LT Intended Purpose and Use: Silvicultural
Maintain Level: Active Sale 2 Post Sale 1 AFRPR Status: Inactive Closure Device: Barrier
Management Strategy (Encourage, Accept, Discourage, Eliminate or Prohibit): Prohibit Erosion Control: Water Bar
Other Considerations:

CULTURAL RESOURCES as planned: No Cultural Concerns JTA 2/5/98
as located: No Cultural Concerns JTA 2/5/98

ENGINEERING/ROADS

Recon/Location Narrative/Design Considerations (major drainages, road grades, future access, etc.):
Planned vs Implemented (describe changes and rational):
Rock Source(s) Location and Special Mitigation: No special concerns. Pits located as shown on map.

FISH HABITAT

No fisheries concerns have been identified during the planning phase. Mitigation may be necessary on some Class III streams after final road location is reviewed by District Biologist.

Stream Crossings As Planned (0 -Class I 0 - Class II 0 - Class III):

Stream Crossings As Located (Class I Class II Class III):

Cataloged Stream Crossings As Located:

GEOLOGY/KARST as planned: The 8444100 road is located in an area of low vulnerability karst. See Soils/Watershed section for mitigation measures.
as located:

LANDS/MINERALS as planned: No concerns.
as located:

RECREATION/VISUALS as planned: No concerns.
as located:

SILVICULTURE as planned: No concerns. CT 3/11/98
as located:

SOILS / WATERSHED as planned:

Avoid the placement of fill material or the side-casting of waste material into karst features (BMP 14.19). Erosion control seeding of cutbanks and fill-slopes should be implemented as soon as possible (BMPs 12.17, 14..8) following reconstruction.
as located:

TIMBER/LOGGING SYSTEM/ADMINISTRATION as planned: No currently identified concerns AMG 3/11/98
as located:

WILDLIFE as planned: No wildlife mitigation.
as located:

Ranger's Signature

Date

Road Data Card

Road Number: 8444100

Aerial Photo

Year:

91

Line:

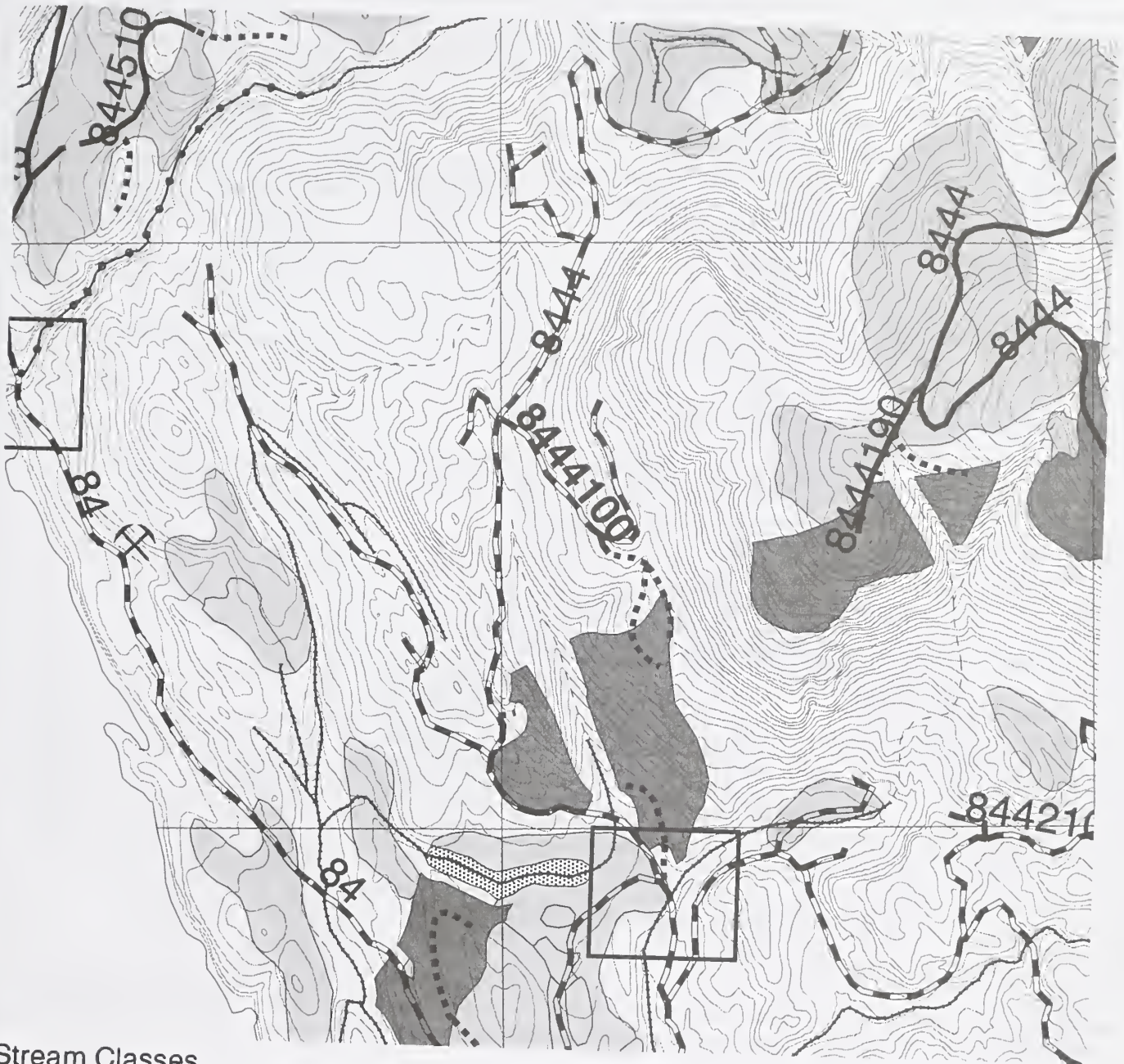
Map Number:

KTN B4 NW

Photo Number:

1390-88

Scale: 1 inch = 1320 feet



Stream Classes

- Class 1 Streams
- Class 2 Streams
- Class 3 Streams

Roads

- Temp Spur
- Existing Road
- Proposed Road

Wetlands

- High Value Wetlands
- Other Wetlands
- 40' Contours
- Lakes
- Proposed Units
- Shoreline

4 inches = 1 mile



- Fish Passage Provided
- Fish Passage Failure
- Rock Pit
- Existing LTF

Road Data Card

Road Number: 8444190	ROD Road Number:	M.P. : 0.0	To M.P. : 0.30
Planned Length (miles): 0.3	Actual Length (miles):	New or Reconstruct:	construction
Unit(s) Accessed: 87	Road Locator:		

ROAD MANAGEMENT OBJECTIVES

Functional Class: L	Traffic Service Level: D	Highway Safety Act Number:
Design Vehicle: LT	Critical Vehicle: LT	Intended Purpose and Use: Silvicultural
Maintain Level: Active Sale 2	Post Sale 1	AFRPR Status: Close
Management Strategy (Encourage, Accept, Discourage, Eliminate or Prohibit): Eliminate		Closure Device: Barrier
Other Considerations: Close road (Obliterate)		Erosion Control: Water Bar

CULTURAL RESOURCES as planned: No Cultural Concerns JTA 2/5/98
as located: No Cultural Concerns JTA 2/5/98

ENGINEERING/ROADS

Recon/Location Narrative/Design Considerations (major drainages, road grades, future access, etc.):
Planned vs Implemented (describe changes and rational):
Rock Source(s) Location and Special Mitigation: No special concerns. Pits located as shown on map.

FISH HABITAT

No fisheries concerns identified during the planning phase.
Stream Crossings As Planned (0 - Class I 0 - Class II 1 - Class III):
Stream Crossings As Located (Class I Class II Class III):
Cataloged Stream Crossings As Located:

GEOLOGY/KARST as planned: The 844190 road is located in an area of low vulnerability karst. See **Soils/Watershed** for mitigation measures.
as located:

LANDS/MINERALS as planned: No concerns.
as located:

RECREATION/VISUALS as planned: No concerns.
as located:

SILVICULTURE as planned: No concerns. CT 3/11/98
as located:

SOILS / WATERSHED as planned:

The 8444190 road location includes areas of high landslide potential (MMI=3) soils (BMP 13.5). Road construction on these steep, potentially unstable slopes may require full-bench design (BMP 14.7). Avoid placing fill on high landslide potential slopes (BMP 14.7). Avoid side-casting and end-haul waste material (BMP 14.7). Dispose of waste material on a stable site (BMP 14.19). Limit blasting for road construction when the soil is saturated (BMP 14.6). The 8440113 road is located on some low value subalpine forested wetlands and alpine muskeg (BMPs 12.5 and 14.2). There are no practicable alternative road locations on nonwetlands to access Harvest Unit 87. Use overlay road construction on wetlands and minimize side ditching, where practicable, to minimize the effects upon groundwater flow (BMP 14.3). Provide cross drains where needed to provide for the passage of surface water and aquatic organisms (BMP 12.5). Avoid the placement of fill material or the side-casting of waste material into wetlands or karst features (BMP 14.19). Erosion control seeding of cutbanks and fill-slopes should be implemented as soon as possible (BMPs 12.17, 14..8) following construction.
as located:

TIMBER/LOGGING SYSTEM/ADMINISTRATION as planned:No currently identified concerns AMG 3/11/98
as located:

WILDLIFE as planned: No wildlife mitigation.
as located:

Ranger's Signature

Date

Road Data Card

Road Number: 8444190

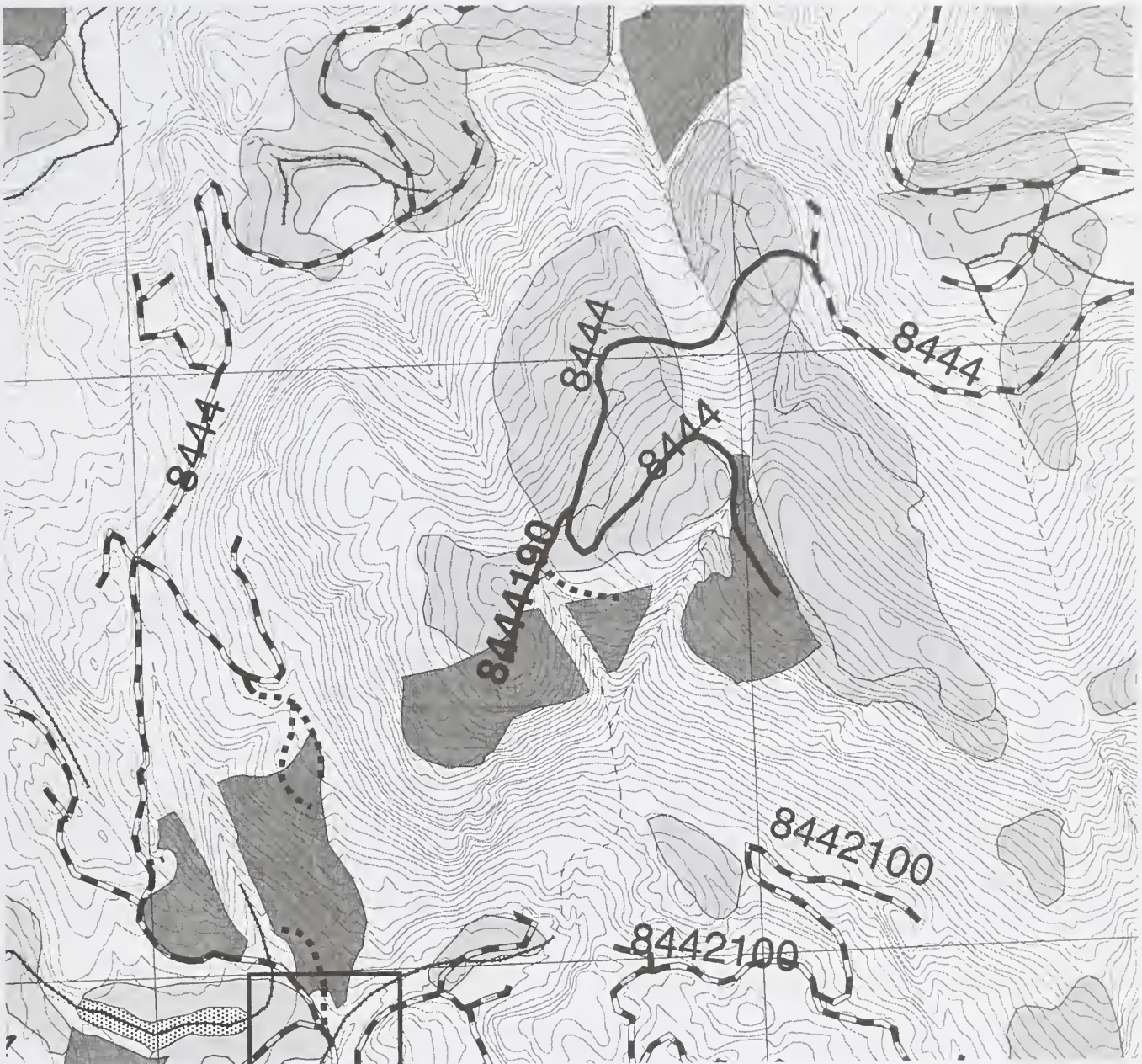
Aerial Photo Year: 91

Line:




Map Number: KTN B4 NW

Photo Number: 1390-88




Scale: 1 inch = 1320 feet



Stream Classes

-  Class 1 Streams
-  Class 2 Streams
-  Class 3 Streams

Roads





-  Temp Spur
-  Existing Road
-  Proposed Road

Wetlands

-  High Value Wetlands
-  Other Wetlands
-  40' Contours
-  Lakes
-  Proposed Units
-  Shoreline

4 inches = 1 mile



-  Fish Passage Provided
-  Fish Passage Failure
-  Rock Pit
-  Existing LTF

Road Data Card

Road Number: 8445000	ROD Road Number: 8445000	M.P.: 0.0	To M.P.: 1.70
Planned Length (miles): 1.70	Actual Length (miles):	New or Reconstruct:	new construction
Unit(s) Accessed: 90	Road Locator:		

ROAD MANAGEMENT OBJECTIVES

Functional Class: Local	Traffic Service Level: D	Highway Safety Act Number: NO
Design Vehicle: LT	Critical Vehicle: LT	Intended Purpose and Use: Silvicultural
Maintain Level: Active Sale 2 Post Sale 1	AFRPR Status: Close	Closure Device: Barrier
Management Strategy (Encourage, Accept, Discourage, Eliminate or Prohibit): Eliminate		Erosion Control: Water Bar
Other Considerations:		

CULTURAL RESOURCES as planned: No Cultural Concerns JTA 2/5/98
as located: No Cultural Concerns 2/5/98

ENGINEERING/ROADS

Recon/Location Narrative/Design Considerations (major drainages, road grades, future access, etc.):

Planned vs Implemented (describe changes and rational):

Rock Source(s) Location and Special Mitigation: No special concerns. Pits located as shown on map.

FISH HABITAT

Passage and timing is required for all Class II streamcrossings (BMP 14.17). All instream road construction will be permitted between June 15 and August 7 (BMP 14.6). Timing restrictions may be required for some Class III streams after final road location is reviewed by District Biologist.

Stream Crossings As Planned (0 - Class I 4 - Class II 0 - Class III):

Stream Crossings As Located (Class I Class II Class III):

Cataloged Stream Crossings As Located:

GEOLOGY/KARST as planned: The 8445000 road is located in an area of low vulnerability karst. See Soils/Watershed for mitigation measures.
as located:

LANDS/MINERALS as planned: No concerns.
as located:

RECREATION/VISUALS as planned: Along lower portion of new road visible from Carroll Inlet: (1) Locate road to minimize visual impact from saltwater. (2) Mitigate effects of sidecast and landing area slash, within 30 feet of road shoulders, by endhauling slash to a nonimpacting area, cover with soil and shape to natural contours. WEA 2/23/98
as located:

SILVICULTURE as planned: No concerns. CT 3/11/98
as located:

SOILS / WATERSHED as planned:

The 8445000 road location includes areas of high landslide potential (MMI=3) soils (BMP 13.5). Road construction on these steep, potentially unstable slopes may require full-bench design (BMP 14.7). Avoid placing fill on high landslide potential slopes (BMP 14.7). Avoid side-casting and end-haul waste material (BMP 14.7). Dispose of waste material on a stable site (BMP 14.19). Limit blasting for road construction when the soil is saturated (BMP 14.6). The 8445000 road is located on some low value forested wetlands and medium value short sedge meadow (BMPs 12.5 and 14.2). There are no practicable alternative road locations on non-wetlands to access Harvest Unit 90. Use overlay road construction on wetlands and minimize side ditching, where practicable, to minimize the effects upon groundwater flow (BMP 14.3). Provide cross drains where needed to provide for the passage of surface water and aquatic organisms (BMP 12.5). Avoid the placement of fill material or the side-casting of waste material into wetlands or karst features (BMP 14.19). Erosion control seeding of cutbanks and fill-slopes should be implemented as soon as possible (BMPs 12.17, 14.8) following construction.

as located:

TIMBER/LOGGING SYSTEM/ADMINISTRATION as planned: No currently identified concerns AMG 3/11/98
as located:

WILDLIFE as planned: Road is within 0.5 miles of bald eagle nest. No blasting within 0.5 miles of eagle nest 3/1 -5/31. If nest is active, no blasting within 0.5 miles of nest 6/1 - 8/31.
as located:

Ranger's Signature

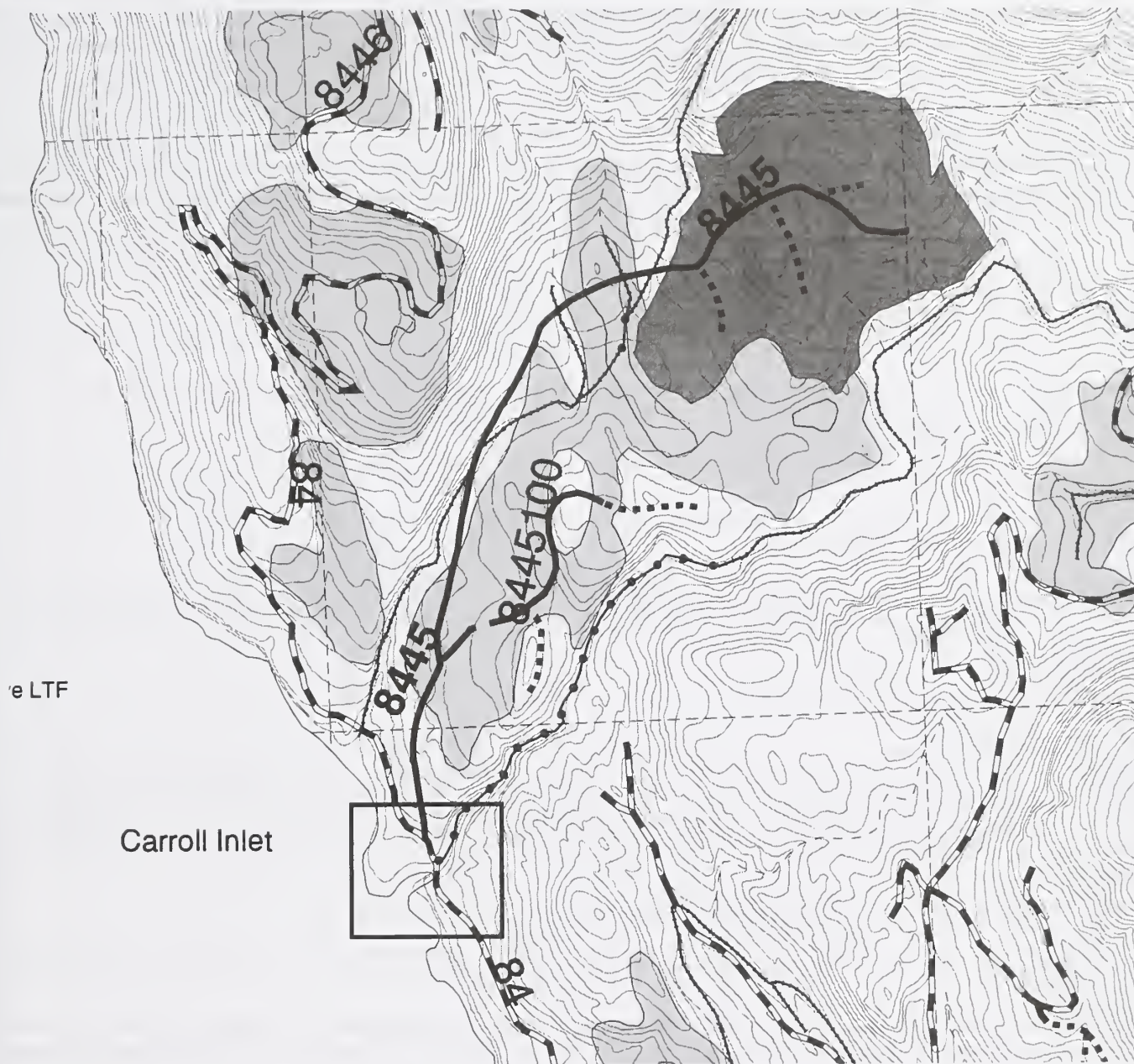
Date

Road Data Card

Road Number: 8445000
Aerial Photo Year: 91

Map Number: KTN B4 NW
Line:
Photo Number: 1390-36

Scale: 1 inch = 1320 feet



e LTF

Carroll Inlet

Stream Classes

- Class 1 Streams
- Class 2 Streams
- Class 3 Streams

Roads

- Temp Spur
- Existing Road
- Proposed Road

Wetlands

- High Value Wetlands
- Other Wetlands
- 40' Contours
- Lakes
- Proposed Units
- Shoreline

4 inches = 1 mile



- Fish Passage Provided
- Fish Passage Failure
- Rock Pit
- Existing LTF

Road Data Card

Road Number: 8445100	ROD Road Number:	M.P.: 0.0	To M.P.: 0.40
Planned Length (miles): 0.4	Actual Length (miles):	New or Reconstruct:	construction
Unit(s) Accessed: 88, 89	Road Locator:		

ROAD MANAGEMENT OBJECTIVES			
Functional Class: L	Traffic Service Level: D	Highway Safety Act Number:	
Design Vehicle: LT	Critical Vehicle: LT	Intended Purpose and Use: Silvicultural	
Maintain Level: Active Sale 2	Post Sale I	AFRPR Status: Closed	Closure Device: Barrier
Management Strategy (Encourage, Accept, Discourage, Eliminate or Prohibit): Eliminate			Erosion Control: Water Bar
Other Considerations: Close road (Obliterate)			

CULTURAL RESOURCES as planned: No Cultural Concerns JTA 2/5/98 as located: No Cultural Concerns JTA 2/5/98
ENGINEERING/ROADS Recon/Location Narrative/Design Considerations (major drainages, road grades, future access, etc.): Planned vs Implemented (describe changes and rational): Rock Source(s) Location and Special Mitigation: No special concerns. Pits located as shown on map.
FISH HABITAT No fisheries concerns identified. Timing restrictions may apply for some Class III streams after final road location is reviewed by District Biologist Stream Crossings As Planned (0 - Class I 0 - Class II 0 - Class III): Stream Crossings As Located (Class I Class II Class III): Cataloged Stream Crossings As Located:
GEOLOGY/KARST as planned: No concerns. as located:
LANDS/MINERALS as planned: No concerns. as located:
RECREATION/VISUALS as planned: Along portions of road visible from Carroll Inlet: (1) Where full bench cut, endhaul material where slopes are too steep to hold material. (2) Mitigate effects of sidecast and landing area slash, within 30 feet of road shoulders, by endhauling slash to a nonimpacting area, cover with soil and shape to natural contours. WEA 2/23/98 as located:
SILVICULTURE as planned: No concerns. CT 3/11/98 as located:
SOILS / WATERSHED as planned: The 8445100 road is located on some low value forested wetlands and scrub-shrub muskeg (BMPs 12.5 and 14.2). There are no practicable alternative road locations on non-wetlands to access Harvest Units 88 and 89. Use overlay road construction on wetlands and minimize side ditching, where practicable, to minimize the effects upon groundwater flow (BMP 14.3). Provide cross drains where needed to provide for the passage of surface water and aquatic organisms (BMP 12.5). Avoid the placement of fill material or the side-casting of waste material into wetlands (BMP 14.19). Erosion control seeding of cutbanks and fill-slopes should be implemented as soon as possible (BMPs 12.17, 14.8) following construction. as located:
TIMBER/LOGGING SYSTEM/ADMINISTRATION as planned: No currently identified concerns AMG 3/11/98 as located:
WILDLIFE as planned: Road is within 0.5 miles of bald eagle nest. No blasting within 0.5 miles of eagle nest 3/1 -5/31. If nest is active, no blasting within 0.5 miles of nest 6/1 - 8/31. as located:

Ranger's Signature	Date
--------------------	------

Road Data Card

Road Number: 8445100

Map Number: ktn b4 nw

Scale: 1 inch = 1320 feet

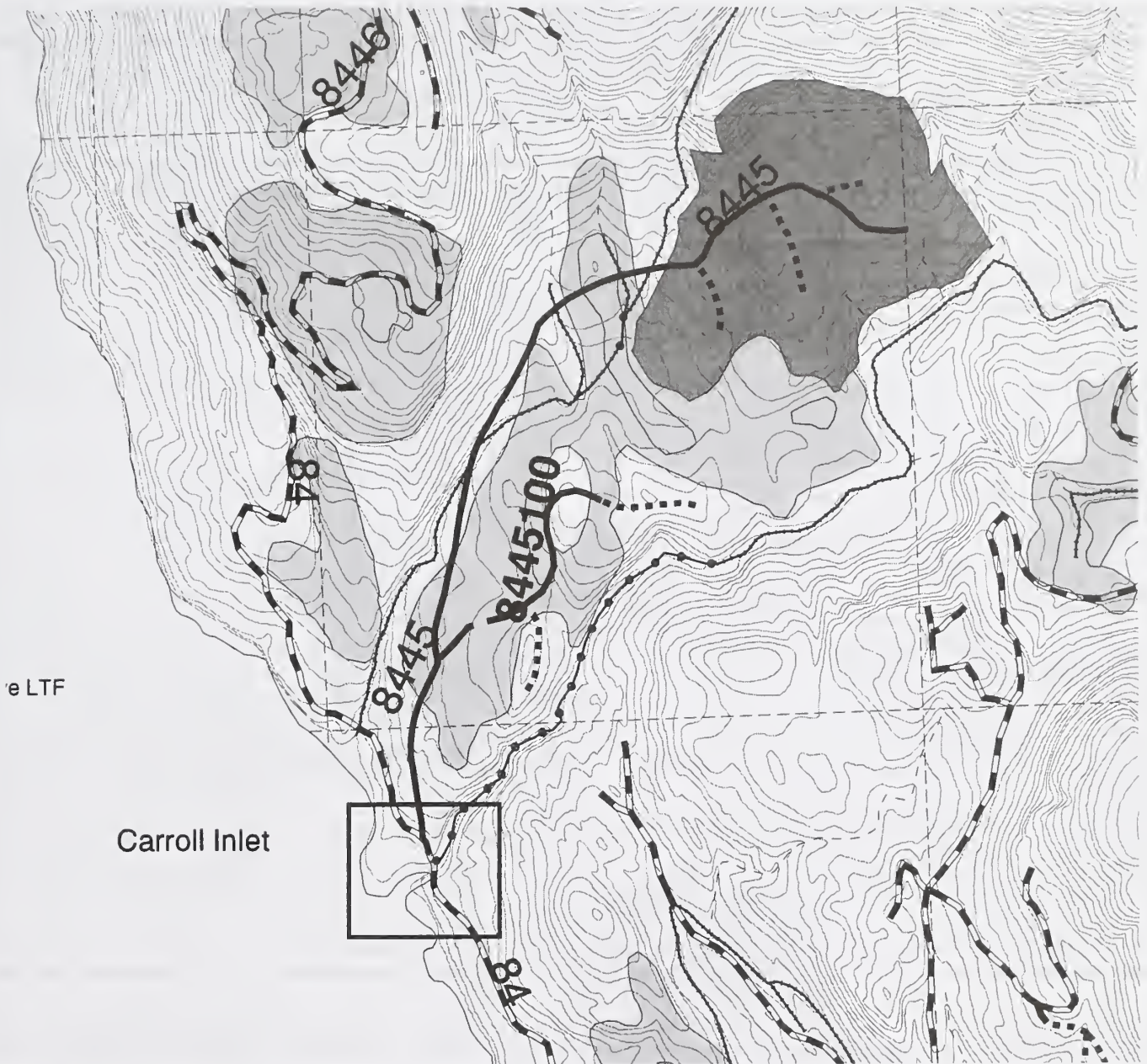
Aerial Photo

Year: 91

Line:

Photo Number:

1390-36



e LTF

Carroll Inlet

Stream Classes

- Class 1 Streams
- Class 2 Streams
- Class 3 Streams

Roads

- Temp Spur
- Existing Road
- Proposed Road

Wetlands

- High Value Wetlands
- Other Wetlands
- 40' Contours
- Lakes
- Proposed Units
- Shoreline

4 inches = 1 mile



- Fish Passage Provided
- Fish Passage Failure
- Rock Pit
- Existing LTF

Road Data Card

Road Number: 8446000	ROD Road Number:	M.P. : 0.0	To M.P. : 0.0
Planned Length (miles):	Actual Length (miles):	New or Reconstruct:	reconstruction
Unit(s) Accessed: none	Road Locator:		

ROAD MANAGEMENT OBJECTIVES

Functional Class: L	Traffic Service Level: D	Highway Safety Act Number:
Design Vehicle: LT	Critical Vehicle: LT	Intended Purpose and Use: Silvicultural
Maintain Level: Active Sale 2	Post Sale 1	AFRPR Status: Active
Management Strategy (Encourage, Accept, Discourage, Eliminate or Prohibit): Accept		Closure Device:
Other Considerations: Heavy road maintainance - replace/repair fish CMP		Erosion Control: waterbar

CULTURAL RESOURCES as planned: No Cultural Concerns JTA 2/5/98

as located: No Cultural Concerns JTA 2/5/98

ENGINEERING/ROADS

Recon/Location Narrative/Design Considerations (major drainages, road grades, future access, etc.):

Planned vs Implemented (describe changes and rational):

Rock Source(s) Location and Special Mitigation: No special concerns. Pits located as shown on map.

FISH HABITAT

Culvert inspections completed in 1997 verified one 36" culvert is not providing fish passage on a Class II stream (BMP 14.17). This streamcrossing is scheduled for culvert replacement in 1998 (BMP 14.2).

Stream Crossings As Planned (0 - Class I 1 - Class II 0 - Class III):

Stream Crossings As Located (Class I - Class II - Class III):

Cataloged Stream Crossings As Located:

GEOLOGY/KARST as planned: No concerns.

as located:

LANDS/MINERALS as planned: No concerns.

as located:

RECREATION/VISUALS as planned: No concerns.

as located:

SILVICULTURE as planned: No concerns. CT 3/11/98

as located:

SOILS / WATERSHED as planned:

Avoid the placement of fill material or the side-casting of waste material into wetlands or on steep, potentially unstable slopes (BMPs 14.7 and 14.19). Erosion control seeding of cutbanks and fill-slopes should be implemented as soon as possible (BMPs 12.17, 14.8) following reconstruction.

as located:

TIMBER/LOGGING SYSTEM/ADMINISTRATION as planned:No currently identified concerns AMG 3/11/98

as located:

WILDLIFE as planned: Road is within 0.5 miles of bald eagle nest. No blasting within 0.5 miles of eagle nest 3/1 -5/31. If nest is active, no blasting within 0.5 miles of nest 6/1 - 8/31.

as located:

Ranger's Signature

Date

Road Data Card

Road Number: 8446000

Aerial Photo

Year:

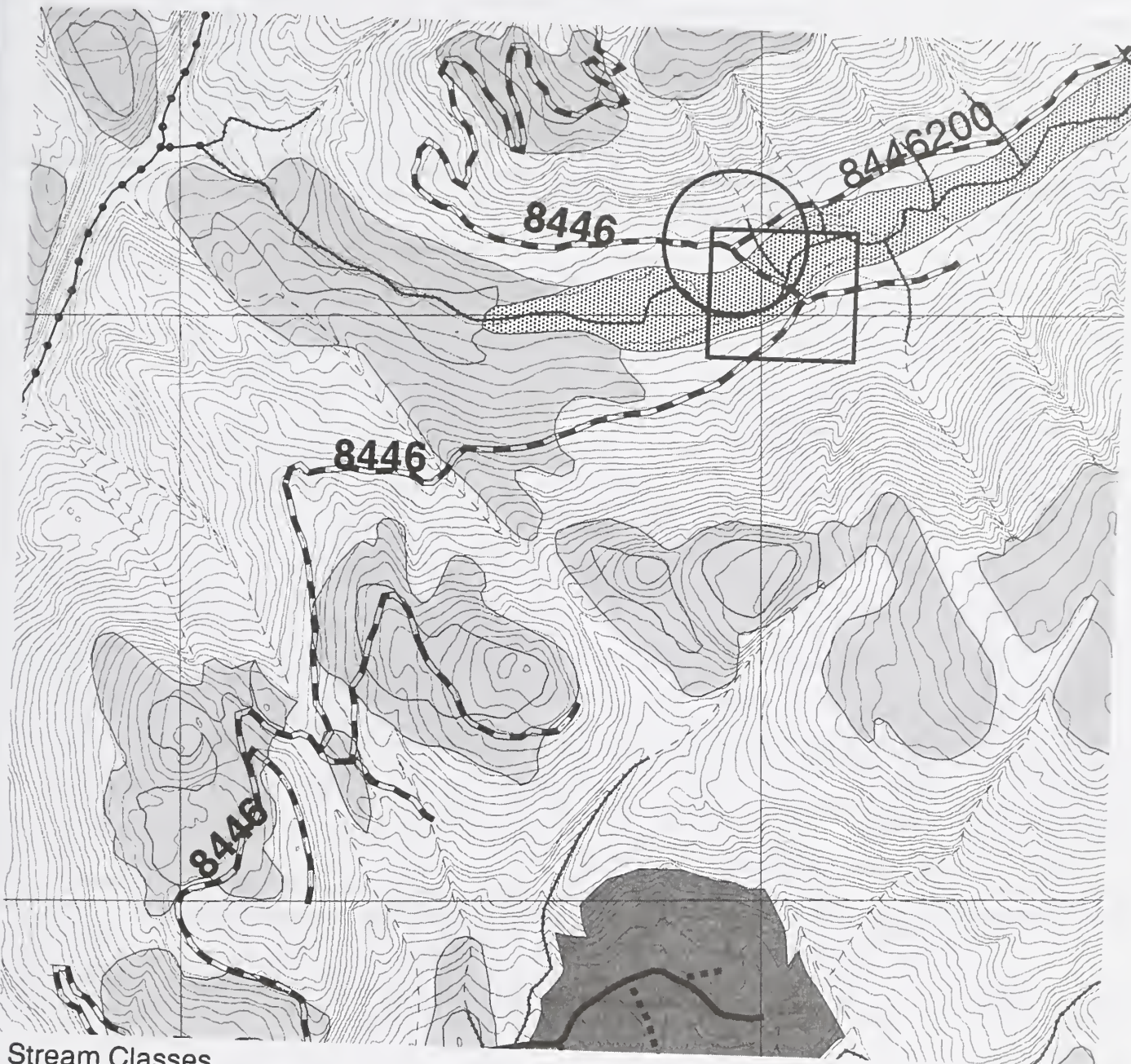
91

Line:

Map Number: KTN B4 NW

Photo Number: 1390-35

Scale: 1 inch = 1320 feet



Stream Classes

- Class 1 Streams
- Class 2 Streams
- Class 3 Streams

Roads

- Temp Spur
- Existing Road
- Proposed Road

Wetlands

- High Value Wetlands
- Other Wetlands
- 40' Contours
- Lakes
- Proposed Units
- Shoreline

4 inches = 1 mile



- Fish Passage Provided
- Fish Passage Failure
- Rock Pit
- Existing LTF

Road Data Card

Road Number: 8446200	ROD Road Number:	M.P. : 0.0	To M.P. : 1.09
Planned Length (miles):	Actual Length (miles):	New or Reconstruct:	reconstruction
Unit(s) Accessed:	Road Locator:		

ROAD MANAGEMENT OBJECTIVES

Functional Class: L	Traffic Service Level: D	Highway Safety Act Number:
Design Vehicle: LT	Critical Vehicle: LT	Intended Purpose and Use: Silvicultural
Maintain Level: Active Sale 2	Post Sale 1	AFRPR Status: Close
Management Strategy (Encourage, Accept, Discourage, Eliminate or Prohibit): Eliminate		Closure Device: Barrier
Other Considerations: Close road (Obliterate)		Erosion Control: Water Bar

CULTURAL RESOURCES as planned: No concerns. JTA 2/5/98
as located: No concerns. JTA 2/5/98

ENGINEERING/ROADS

Recon/Location Narrative/Design Considerations (major drainages, road grades, future access, etc.):
Planned vs Implemented (describe changes and rational):
Rock Source(s) Location and Special Mitigation: No special concerns. Pits located as shown on map.

FISH HABITAT

All culverts crossing water quality streams on this road are scheduled for removal in 1998 (BMP 14.2).
Stream Crossings As Planned (0 - Class I 0 - Class II 5 - Class III):
Stream Crossings As Located (Class I Class II Class III):
Cataloged Stream Crossings As Located:

GEOLOGY/KARST as planned: No concerns.
as located:

LANDS/MINERALS as planned: No concerns
as located:

RECREATION/VISUALS as planned: No concerns.
as located:

SILVICULTURE as planned: No concerns. CT 3/11/98
as located:

SOILS / WATERSHED as planned:

Avoid the placement of fill material or the side-casting of waste material into wetlands or on steep, potentially unstable slopes (BMPs 14.7 and 14.19). Erosion control seeding of cutbanks and fill-slopes should be implemented as soon as possible (BMPs 12.17, 14.8) following reconstruction.
as located:

TIMBER/LOGGING SYSTEM/ADMINISTRATION as planned: No currently identified concerns AMG 3/11/98
as located:

WILDLIFE as planned: No wildlife mitigation.
as located:

Ranger's Signature

Date

Road Data Card

Road Number: 8446200

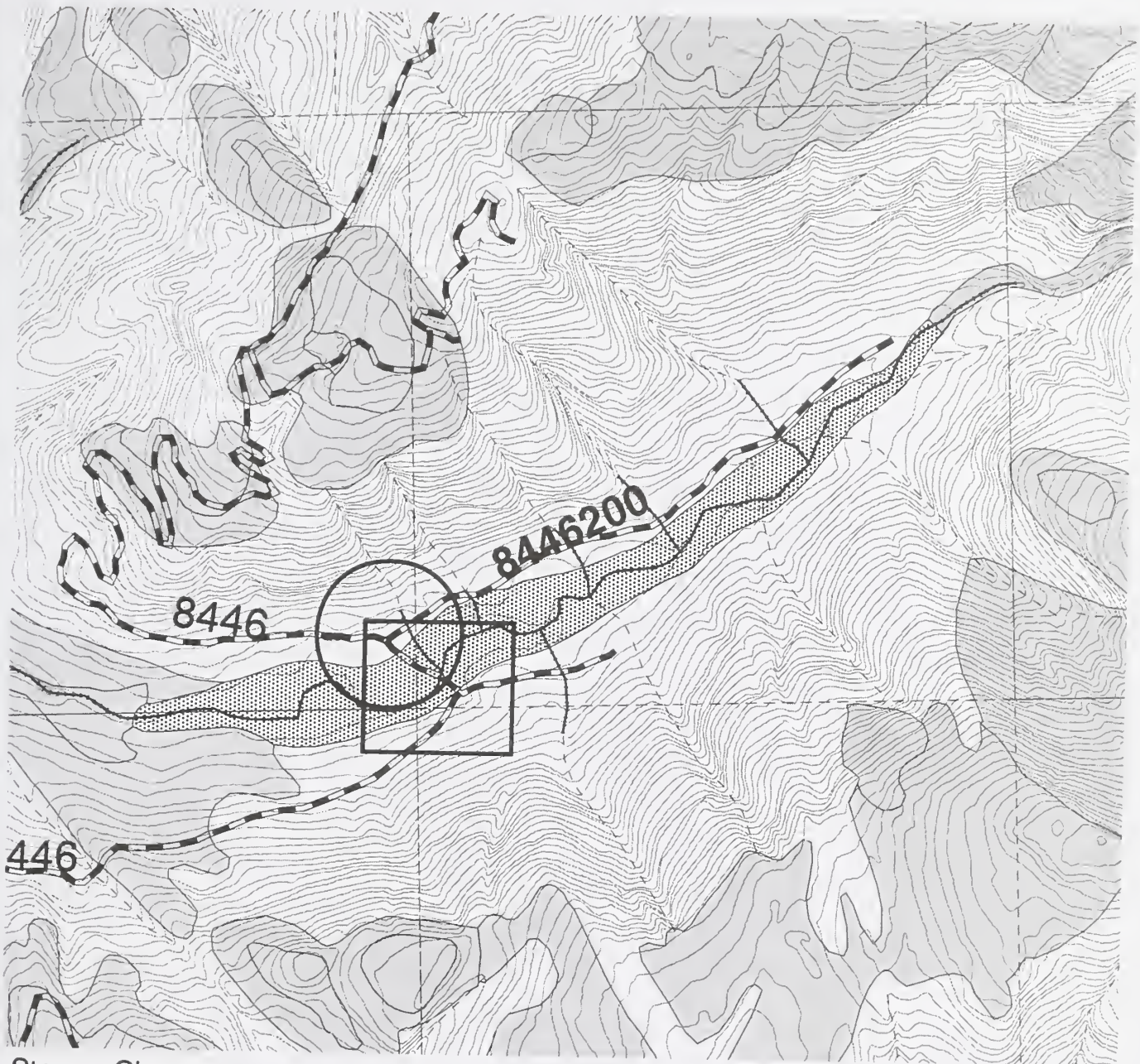
Aerial Photo Year: 91

Line:

Map Number: KTN B4 NW

Photo Number: 1390-34

Scale: 1 inch = 1320 feet



Stream Classes

- Class 1 Streams
- Class 2 Streams
- Class 3 Streams

Roads

- Temp Spur
- Existing Road
- Proposed Road

Wetlands

- High Value Wetlands
- Other Wetlands
- 40' Contours
- Lakes
- Proposed Units
- Shoreline

4 inches = 1 mile



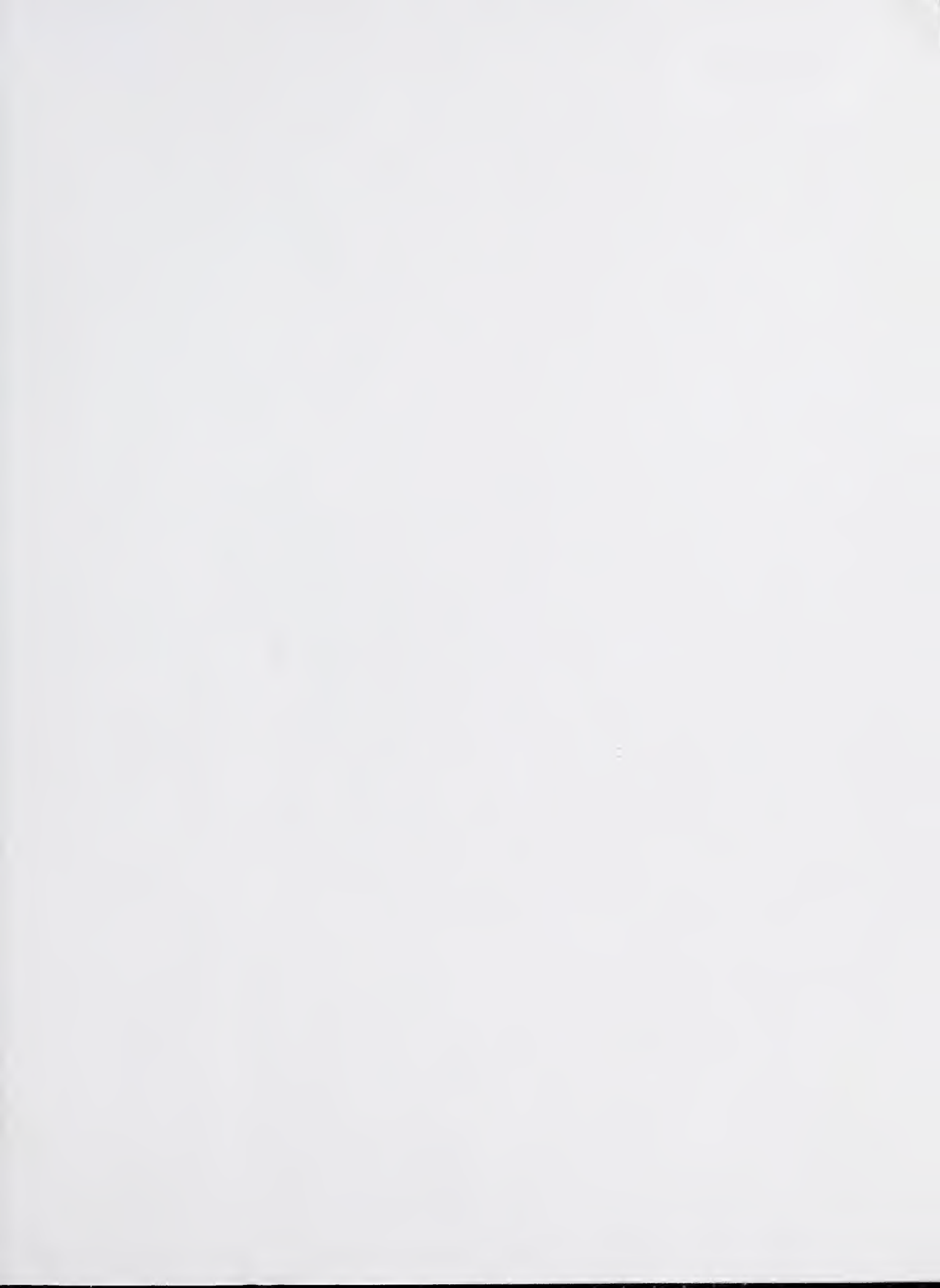
Fish Passage Provided

Fish Passage Failure

Rock Pit

Existing LTF







1022392915

The United States Department of Agriculture (USDA) prohibits discrimination in its programs on the basis of race, color, national origin, sex, religion, age, disability, political beliefs, and marital or familial status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice or TDD).

To file a complaint, write the Secretary of Agriculture, U.S. Department of Agriculture, Washington, DC 20250, or call 1-800-245-6340 (voice) or 202-720-1127 (TDD). USDA is an equal employment opportunity employer.



Federal Recycling Program
Printed on Recycled Paper



1022392915